

County of Cuyahoga, Ohio

October 2018 Tabulation Equipment Survey



### **PROPOSAL**

November 9, 2018



November 8, 2018

Ms. Shantiel Soeder
Election and Compliance Administrator
Cuyahoga County Board of Elections
2925 Euclid Avenue
Cleveland, Ohio 44115

Re: October 2018 Tabulation Equipment Survey

#### Dear Ms. Soeder:

This is an exciting time in election services in Cuyahoga County, Ohio. With the necessity for change upon you, there is great opportunity to renew the voting process and election management for voters and election officials alike.

Hart InterCivic is privileged to have this opportunity to present our proposal to you for consideration in response to your October 2018 Tabulation Equipment Survey.

Hart is in a position to offer the County a truly different election technology. No other vendor can offer an *all*-new, truly modernized voting system that has received multiple federal certifications from the U.S. Election Assistance Commission.

In our proposal, we present two options for your consideration. Both are paper ballot solutions that allow every voter to vote the same type of paper ballot regardless if they are voting in person on election day, absentee by mail, absentee in person or an ADA voter using our ballot marking device.

Our solution meets the specific requirements for voting systems in Ohio with clear advantages for the future of elections:

All new, state-of-the-art voting system designed and developed from the ground up with a modern approach to holistic design and a rigorous approach to security.

**A proven professional services plan** to ensure timely, successful implementation of the voting system and cost-effective, trouble-free operations over the lifetime of use.

**A team of elections experts** with extensive experience in training and implementing efficient transitions from outdated systems.

**Customer satisfaction** heard through the voice of our customers and industry-leading ratings in our annual survey.



Hundreds of jurisdictions in the U.S. have left their prior vendors to experience superior technology and extreme customer satisfaction with Hart. In 2018, 92% of Hart customers rated our service as excellent or above average; and 92% said they would recommend us to an industry colleague.

Verity Voting is backed by the experience and integrity of the Hart team, and the proven, sustainable approach we propose herein positions the County to provide secure, accurate, and accessible elections to your voters for many years to come. Hart implements Verity as a secure, comprehensive system with purpose-built hardware and software in combination with enterprise-class commercial-off-the-shelf components. First certified in 2015, Verity stands apart from older systems and requires very little maintenance. Hart and Verity will provide long-term returns through secure and equitable voting and independence in managing elections.

We are ready to embark on this exciting transition and look forward to taking the next steps in your selection process.

As the President and CEO of Hart InterCivic, I respectfully submit this information on behalf of the entire Hart team. We would be honored to be selected as a trusted partner with the Cuyahoga County.

Sincerely,

Phillip W. Braithwaite

for the think

President and CEO





#### **TABLE OF CONTENTS**

#### **Cover Letter**

Tabulation Vendor   Initial Survey	IS-1
Detailed Response: Tabulation Vendor   Initial Survey	DR-1
Verity Voting System	VV-1
Verity Software	VV-4
Verity Hardware	VV-17
Cost Estimate	CE-1
Additional Information	AI-1
Security	AI-2
Sample Verity Master Agreement	AI-10
Vendor Customer List	CL-1

TABLE OF CONTENTS





This page intentionally blank.

i TABLE OF CONTENTS

October 2018

# TABULATION EQUIPMENT SURVEY

ssoeder@cuyahogacounty.us

Cuyahoga County Board of Elections

# TABULATION VENDOR | INITIAL SURVEY Name Company Company Website Address Address 2 City State Zip Code Email Address Phone Number

- 1. Provide a brief company history including the main business of your company, the length of time in business and number of employees.
- 2. Provide a current list of customers who are using or have previously used your Tabulation system.
  - Contact name, email and phone number
  - Jurisdiction size
  - Date of implementation
  - Product(s) and quantities purchased
  - What software and firmware versions are currently being used

#### Please use attached excel spreadsheet "Vendor Customer List Template".

- 3. Based on the Cuyahoga County data attached to the email, provide a cost estimative for your paper based tabulation system.
  - At least two (2) precinct ballot scanners per polling location
  - One (1) ADA marking device per location
  - High Speed Ballot Scanners
    - o Daily scan period typically six (6) hours per day over a seventeen (17) day period
  - Equipment Reserves (Backup Equipment) for election day
  - Training Equipment
    - o NOTE: Approximately 5000 workers attend an election training session during a county-wide election.

Please attach a separate document for this response.

- 4. Provide a detailed description of hardware and network product(s) listed in the estimate provided. Please include:
  - All relevant information, including physical descriptions, model numbers, and part numbers, concerning components such as, but not limited to, laptops, tablet computers, printers, cables, connectors, servers, internet connectivity, precinct ballot scanners, high-speed ballot scanners, ADA equipment, etc.
  - Whether a component is proprietary to the Vendor or whether the component is a commercial off-the-shelf product.
  - What is the capacity of all precinct ballot scanners? How are they stored/managed?
  - Are the precinct based scanners programmable for multiple precincts?
  - Specifically identify precinct scanner ballot box options.

#### Please attach a separate document for this response.

- 5. List any additional recommended hardware or software which is not required as part of the tabulation system?
- 6. What is the throughput for each type of ballot scanner? Include the details for:
  - All ballots sizes available
  - Flat v. Folded ballots
    - o NOTE: Our absentee ballots are folded three times prior to being sent out to the voters.
- 7. Does the high speed ballot scanner(s) have the ability to sort ballots as they are being scanned?
  - Write-ins, Remakes, Blank Ballots, etc.
- 8. Do the ballot scanner(s) have the ability to save ballot images? If so, what is the capacity, methodology for saving images and how long does the import/export of these images take considering a county of Cuyahoga's size?
- 9. What is the expected life of all equipment?
  - Battery life
  - Hardware (each piece of equipment)

10.	What happens in the event of total loss of power? Is the data saved?
11.	What type of ballot stock is required for use with your system. What size options are available?
12.	Describe the different levels/types of technical support provided during the initial implementation and for each election moving forward?
	Do you have a standard implementation process or a list of tasks that must be completed during the implementation phases, who is responsible for those tasks and how long each task is expected to take in a county of our size?  Mock elections/Pilot projects Resources available to be devoted to this process How many pieces of equipment would be provided for either process?
14.	Provide a copy of the standard acceptance testing process and procedures for all components of the tabulation system.
15.	<ul> <li>Are sample L&amp;A Testing procedures available?</li> <li>Does your system generate a test deck? If so, is it customizable?</li> <li>Is ballot adjudication available with your system?</li> </ul>
16.	<ul> <li>What end user training is available?</li> <li>Train the Trainer, BOE Staff, PEOs</li> <li>Cost, length (hours per "class"), class size</li> </ul>

- 17. Can you provide us with training documentation and if your system is purchased will you allow us to use your stock photos and edit your procedural documentation to be tailored for use in Cuyahoga County?
- 18. Provide a list of known anomalies with the system (technical bulletins released) in all versions of the hardware, firmware, and software of certified product.
  - Include details of any material defects or failures of any part of the system along with the election jurisdiction in which the defect or failure was discovered, the nature of the defect or failure, how it was discovered and resolved.
- 19. Is your system compatible with the CCBOE's current voter registration system and Electronic Pollbook systems and has this compatibility been tested and/or used in other election jurisdictions?
  - Can the system to be updated to be compatible with future voter registration systems the CCBOE may obtain?
  - Describe the middleware system that is used in between the tabulation system DIMS/Precinct Central (Tenex).
  - Is it compatible with the certified Remote Marking Systems? Cuyahoga uses Democracy Live specifically
- 20. Does the system have the ability to be re-configured and customized to accommodate needs that change or evolve overtime, especially those required by new laws?
- 21. Do you have a standard maintenance and upgrade schedule for new system releases and patches, including any additional costs associated with maintenance and upgrades or equipment repairs?
- 22. Provide details of the Audit logs generated by each part of your system.
  - Are all user actions logged?
  - Are the audit logs unencrypted and able to be printed and exported?
  - What is the default format?

- 23. Briefly describe all results reports the system can generate and provide sample copies of such reports.
  - Can customized reports be designed and will our staff have the ability to customize without vendor involvement?
  - Are the reports searchable or available to be exported into other document formats?
  - Can the reports easily be exported for web viewing?
  - What is the standard/default format used?
- 24. Do you provide printing services for a county of our size?





#### **DETAILED RESPONSE**

#### **DETAILED RESPONSE: TABULATION VENDOR | INITIAL SURVEY**

1. Provide a brief company history including the main business of your company, the length of time in business and number of employees.

Hart is expertly qualified to provide the full scope of products and services required by this solicitation. Founded more than 100 years ago in 1912, Hart is now a nationally recognized leader in election innovation, serving more than 800 jurisdictions, with exceptional customer relationships and superior service.

Hart is the voting system solution provider for two statewide systems including the State of Hawaii and the State of Oklahoma. We also provide full service voting solutions on a similar scale to two of the five largest counties in the United States (Harris County, Texas and Orange County, California).

Customer satisfaction is a hallmark of Hart's performance, with 94 percent of customers rating their experience as "excellent" or "above average." In our 2018 customer satisfaction survey, 92% of Hart customers rated our service as excellent or above average; and 92% said they would recommend us to an industry colleague.

Hart's team of 80 employees includes 42 technical team members directly involved in election management system development and implementation. These professionals include experienced project managers, training specialists, systems and software architects, software engineers, mechanical engineers, electrical engineers, quality assurance specialists, product managers, supply chain and manufacturing managers, customer support consultants, technicians, technical publication specialists and other experts.





- 2. Provide a current list of customers who are using or have previously used your Tabulation system.
  - Contact name, email and phone number
  - Jurisdiction size
  - Date of implementation
  - Product(s) and quantities purchased
  - What software and firmware versions are currently being used

#### Please use attached excel spreadsheet "Vendor Customer List Template".

Yes, Hart complies with this requirement. Please see the Excel spreadsheet title **Vendor Customer List**, in our response.

- 3. Based on the Cuyahoga County data attached to the email, provide a cost estimative for your paper based tabulation system.
  - At least two (2) precinct ballot scanners per polling location
  - One (1) ADA marking device per location
  - High Speed Ballot Scanners
    - Daily scan period typically six (6) hours per day over a seventeen (17) day period
  - Equipment Reserves (Backup Equipment) for election day
  - Training Equipment
    - NOTE: Approximately 5000 workers attend an election training session during a county-wide election.

#### Please attach a separate document for this response.

Yes, Hart complies with this requirement. Please see the **Cost Estimate** included with our response in which we have addressed the points of this requirement.

DR-2 DETAILED RESPONSE





- 4. Provide a detailed description of hardware and network product(s) listed in the estimate provided.

  Please include:
  - All relevant information, including physical descriptions, model numbers, and part numbers, concerning components such as, but not limited to, laptops, tablet computers, printers, cables, connectors, servers, internet connectivity, precinct ballot scanners, high-speed ballot scanners, ADA equipment, etc.
  - Whether a component is proprietary to the Vendor or whether the component is a commercial off-the-shelf product.
  - What is the capacity of all precinct ballot scanners? How are they stored/managed?
  - Are the precinct based scanners programmable for multiple precincts?
  - Specifically identify precinct scanner ballot box options.

#### Please attach a separate document for this response.

Yes, Hart complies with this requirement. Please see the section titled **Verity Voting System** in our response in which we have addressed the points in this requirement.

5. List any additional recommended hardware or software which is not required as part of the tabulation system?

There are no unnecessary components, neither hardware nor software, listed in our proposal. All of the components identified in the section titled **Verity Voting System** are required as part of the tabulation solution we have defined for Cuyahoga County.

- 6. What is the throughput for each type of ballot scanner? Include the details for:
  - All ballots sizes available
  - Flat v. Folded ballots
    - NOTE: Our absentee ballots are folded three times prior to being sent out to the voters.

In Hart's response in the section **Verity Voting System**, we have introduced two digital scanning solutions: Verity Scan; and Verity Central. Verity Scan is a precinct digital scanning solution for paper ballots. Verity Central is a high-speed central ballot scanning and adjudication solution.





Please see the section **Verity Voting System** for a full explanation of scanning technology proposed for Cuyahoga County.

To respond to this question of the County survey, we have compiled the relevant specifications from each of the Verity scanning solutions.

#### **THROUGHPUT**

#### Verity Scan Digital Ballot Scanning/Tabulation

- Minimum of 10 sheets per minute; real-world processing speed surpasses the minimum.
- Scans both sides of ballot
- User inserts ballot in any orientation
- Consistent throughput regardless of ballot fold lines, creases and wrinkles

#### Verity Central High-speed Scanner and Vote Capture/Adjudication

- 130 sheets per minute, which is 7,800 pages per hour
- Scans both sides of ballot
- User scans ballots in batches
- Consistent throughput regardless of ballot fold lines, creases and wrinkles

#### **BALLOT SIZES**

Verity support ballots of the following sizes:

- • 8 ½ x 11-inch
- 8 ½ x 14-inch
- 8 ½ x 17-inch
- 8 ½ x 20-inch
- 11 x 17-inch (Verity Central only)

#### FLAT V. FOLDED BALLOTS

Hart recognizes that absentee ballots used in Cuyahoga County are folder three times prior to being sent out to voters. Verity is a robust system that can accommodate fold lines.



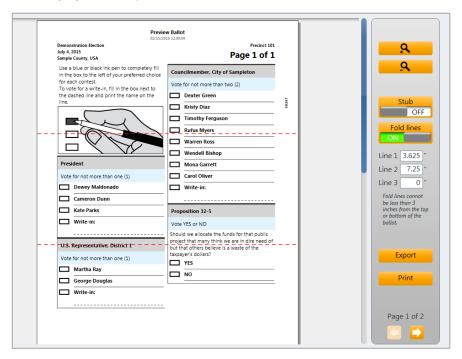


#### Fold lines do not affect the ability of Verity's vote counting devices to read

**ballots.** Our commercial-off-the-shelf scanners process folded ballots reliably and efficiently. Hart recognizes that "real world" ballots that must be processed by high-speed scanners typically have fold lines and are often returned to the central office in less than pristine condition. Accordingly, a significant portion of our Quality Assurance testing for high-speed scanners is designed to replicate these conditions, including fold lines.



For Verity users who wish to be extra-cautious about fold lines, Verity does have an innovative feature in the software that allows Verity Data and Verity Build to display ballot previews with fold marks, according to measurements input by the user, based on the folding pattern that will be used. Through the use of this feature, if fold lines pass through any target area boxes, users can take the additional caution of "nudging" ballot layouts.







- 7. Does the high speed ballot scanner(s) have the ability to sort ballots as they are being scanned?
  - Write-ins, Remakes, Blank Ballots, etc.

In Hart's response in the section **Verity Voting System**, we provide a detailed introduction to the **Verity Central** high-speed central ballot scanning and adjudication solution.

In response to this question in the survey, we note that Verity Central allows for easy resolution of all voter intent issues onscreen, contest-by-contest, with clear color-code flags and consistently easy-to-understand plain languages instructions.

The County will enjoy the following benefits Verity Central solution:

- Next-generation digital scanning and online adjudication system. Others will tout their "all-new digital scanning systems" with great new features like onscreen adjudication and COTS scanners, but we introduced digital scanning and onscreen adjudication over a decade ago. What other vendors call "auto-adjudication" or "visualization" is **not** true onscreen adjudication. Only Verity provides unique contest-by-contest resolution for all voter intent issues with clear, color-coded flags, and Verity's consistently easy-to-understand, plain-language instructions. Verity builds on the lessons learned from the past ten years and the result is the easiest, most transparent, and most efficient high-speed scanning system available.
- True onscreen adjudication. What other vendors call "auto-adjudication" or "visualization" is not true onscreen adjudication. Only Verity enables you to easily resolve all voter intent issues onscreen, contest-by-contest, with clear, color-coded flags and Verity's consistently easy-to-understand, plain-language instructions
- Transparency and easy auditability. With an unmatched variety of image
  filters, you easily locate exactly the ballot images you want. Plain-language notes
  clearly show exactly how voter selections are recorded.
- **No presorting.** Scan multiple precinct styles and/or multiple languages in the same batch, in any orientation.
- No outstacking and rescanning. With Verity Central, there's no extra work –
  just an easy, efficient workflow. Preserve your ballots in their original form, with
  minimal handling.
- **No-wait scanning.** Verity Central scans without tabulating, so you can start scanning weeks before polls close on Election Day. No more late nights at the scanner.

DR-6 DETAILED RESPONSE





- Cost-effective scalability. Choose the right Hart-integrated COTS scanner for your jurisdiction's size, budget and need for speed. You get industry-best scanning technology with the assurance of Hart support and EAC certification.
- Reduced training time. User-friendly interface has the same look-and-feel as
  other Verity Voting system components, for shorter training time and lower
  training costs.
- Versatile for long-term value. Verity Central is part of the holistic, scalable
   Verity Voting solution that can adapt as your needs change.
- Centralized, fine-tuned control of adjudication rules. You can control/limit
  the conditions that determine which mismarks will be accepted and will not
  require adjudication.
- Accelerated adjudication. The ability to apply "accept" functionality to
  batches means you can choose, for example, whether overvotes will be accepted
  upon scanning, reducing the number of ballots that must be adjudicated
  unnecessarily. You can also set Verity to "accept" (auto-resolve) specific types
  of conditions/classes of marks by batch, on a selective basis.
- Faster adjudication of damaged contests. A Ballot Review screen speeds the scanning process, with fewer interruptions and fewer "bad ballots" to be investigated.
- Faster, more selective reviews/recounts. Filters for specific marked contests enable quick review of exactly the information needed for example, if an attorney for a candidate says, "I need to see the ballot images for every time someone voted for this candidate, in that particular race."
- Speedier navigation and fewer keystrokes for adjudicators. Previous and Next buttons on the adjudication screen work like "Previous unresolved" and "Next unresolved."
- Quickly find "needles in the haystack" ballots. User-friendly combinations
  of different filters enable you to easily find types of ballots that can be difficult
  to locate.

#### WRITE-IN BALLOTS/ADJUDICATION

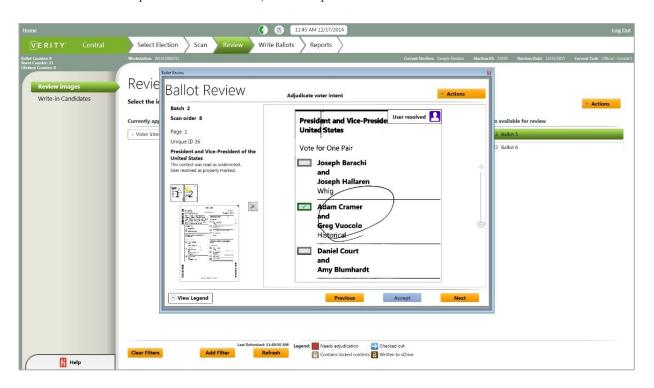


Verity Central includes unique onscreen, color-coded ballot adjudication features that increase the efficiency and accuracy of ballot adjudication and make it unnecessary to alter the original paper ballot in any way.





Verity Central identifies ballots requiring adjudication, including ballots with writeins, according to parameters set by the state election code and local election officials. Adjudication occurs by reviewing the ballot's digital image on the computer screen to record write-in votes or to reject voter write-in entries. As issues are resolved, election officials use a simple menu-driven interface to make and record decisions. An audit log, including the user ID, records all resolution decisions, providing a complete record of the adjudication process.



# SORTING OPTIONS FOR BALLOT PROCESSING BY PRECINCT, OUTSTACKING/SEPARATION OF WRITE-INS, AMBIGUOUS MARKS AND BLANK BALLOTS



Verity Central has powerful capabilities that greatly accelerate the processing of ballots, even in situations where older, traditional systems have no other option but to reject ballots that contain overvotes, write-ins, or other conditions that prevent the ballot from being read. In other words, where older systems rely on time-consuming "outstacking," physical segregation of ballots, and the need to perhaps re-make ballots, Verity Central handles such situations far more efficiently and elegantly, through the user of digital image management.





With Verity, it is only under circumstances where a ballot literally cannot be imaged for exceptional reasons (due to a defaced bar code, for example) that Verity Central is unable to read the ballot. In such exceptional circumstances, Verity Central continues scanning a batch without interruption, and the Scan Batch report identifies specific ballots in the batch that could not be read, with a plain language message to the operator. In addition, the reasons for the rejection, as well as the scan sequence number, are identified in an easy-to-read Batch Scan report.

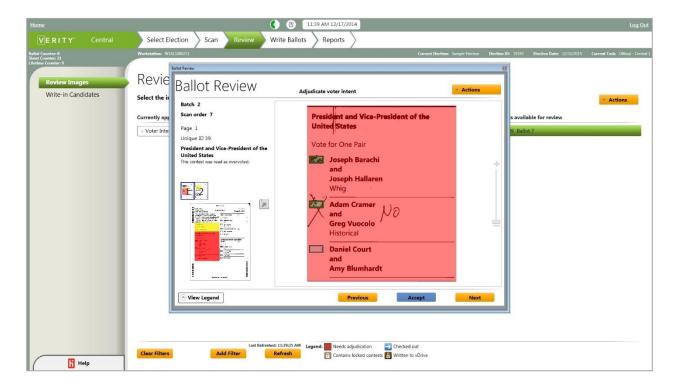
Verity operates with an efficiency that sets it apart from older, non-digital approaches. Instead of forcing users to outstack and hand-count ballots with questionable voter marks, as is the case with older systems, with Verity Central, you can easily adjudicate ballots with questionable marks by means of the innovative Verity Central onscreen adjudication process. This process color-codes contests with marks that require attention (overvotes, undervotes, invalid marks, blank ballots, etc.) and enables authorized users to determine the disposition of unresolved marks without needing to handle the original marked ballot or re-make and re-scan outstacked ballots. In this way, Verity Central greatly boosts efficiency and accelerates reporting.

#### NO PRE-SORTING OF BALLOTS

With Verity, there is no need to pre-sort the ballots; Verity sorts them digitally, minimizing paper handling. You simply feed stacks of ballots, batched as you wish, into the high-speed scanner. Once you scan your ballots, you can immediately put them away for storage. Highly accurate software filters enable you to quickly retrieve high-quality digital images of exactly the ballots you need, if needed.







Ballots with questionable marks can be easily adjudicated with the innovative Verity Central onscreen adjudication process.

#### WARN ABOUT BLANK BALLOT



Verity Central scans and records blank ballots, while flagging the ballot as needing adjudication because of an undervote condition.





8. Do the ballot scanner(s) have the ability to save ballot images? If so, what is the capacity, methodology for saving images and how long does the import/export of these images take considering a county of Cuyahoga's size?

Yes. Both Verity Scan and Verity Central have the ability to save ballot images.

Images are stored on the removable storage drive and, for transparency, can be accessed outside of Hart software on any PC. Standard file management guidelines will apply regarding storage and export time.

If the user selects the appropriate option in Verity Build (the ballot definition application), Verity Scan will automatically save ballot images for each scanned ballot to the vDrive (removable storage media). These images are accessible directly from the vDrive and do not require any specific import or export procedures or proprietary software in order to view the ballot images.

#### **VERITY SCAN**

Verity Scan has an onboard memory capacity of 8 GB, enough to store 10,000 single-sheet ballots per voting event.

#### Alerts if memory capacity is being reached

Verity Scan alerts poll workers if the memory capacity is being reached. Internal memory as well as the removable memory together contain enough space to accept as many as 10,000 single-sheet ballots per voting event.

#### **VERITY CENTRAL**

Verity Central automatically saves ballot images for each scanned ballot to the election database. Using the Verity Central software, these ballot images may be filtered by ballot contents, precinct, and various other ballot attributes and may be viewed directly in the user interface. Verity Central can store up to 1,000,000 ballot images per voting event.





#### 9. What is the expected life of all equipment?

Verity is the only all-new, fully integrated voting system in the marketplace. With Verity, you get a voting system that is early in its lifecycle; you are investing in the future of elections for all stakeholders. Because you are selecting the voting equipment that will support your elections for many years to come, it is critically important that you choose a system that is **early in its product lifecycle – a system built to accommodate change**.

New hardware. All the proposed hardware is the most flexible, cost-efficient elections hardware available today. Verity equipment is compact – easy to store and easy to transport in ordinary vehicles.

**New software.** The all-new Verity Voting system is a holistic, integrated system that streamlines election management end-to-end. We designed Verity from the ground up to be easy to use by everyone across the entire elections process: **easy to set up**, **easy to learn**, **and easy to use**.

**New supply chain.** Because Verity is an all-new, modern system that employs the latest technologies and components, the U.S.-based supply chain is robust and well-positioned for years of service and support.

**New services.** Built on a foundation of best-in-industry services, as evidenced by our off-the-charts customer satisfaction and customer retention ratings, our implementation, training and support for Verity are newly-conceived yet incorporate best practices developed over more than 100 years.

**Adaptable for the future.** Verity is adaptable – able to accommodate flexible ballot layout, vote centers, precinct voting, convenience voting, ranked choice voting, emergency voting locations, and more, future-proofing the State's investment.

**Secure and transparent.** Verity's design incorporates the latest best practices, protecting data and enabling efficient, transparent audits – not a black box.

#### Battery life

The projected life of batteries is from 3 to 5 years depending on storage, recharge cycles, and mechanical use conditions.

#### Hardware (each piece of equipment)

Verity hardware has a lifecycle starting at ten years of anticipated use for successful elections.

DR-12 DETAILED RESPONSE





#### 10. What happens in the event of total loss of power? Is the data saved?

In the event of a loss of power, your data remains secure and saved. Hart has years of working with poll workers and listened to their concerns when we developed Verity.

Troubleshooting and resolving issues at the polling place is quick and simple.

In the event of a power disruption, all images and cast vote records remain saved on the vDrive and on the internal memory of the Verity Scan device. Verity Scan includes an onboard internal battery capable of providing backup power for a minimum of two hours. While one battery is in use, an extra battery can be recharging at a nearby electrical outlet, ensuring a reliable source of continuous power for the unit. In case of battery failure, poll workers can simply replace the battery – not the entire device.

#### Data protection in the event of a power failure

In the event of a power disruption, all images and cast vote records remain saved on the vDrive and on the internal memory of the Verity Scan device. Verity Scan includes an onboard internal battery capable of providing backup power. If power has not been restored by the time the backup battery has been fully discharged, Scan commences a graceful shutdown process. Once power is restored, the device can be rebooted and resume normal operations. All cast vote records and ballot images are maintained on the vDrive and on the hard drive of the Scan device.





#### 11. What type of ballot stock is required for use with your system. What size options are available?

Verity uses plain paper readily available anywhere from various suppliers, not proprietary stock. Verity does not require any markings not necessary for ballot identification or tabulation. COTS blank paper can be used to print ballots for your Verity Voting system, and our recommendation is to use 28#/70# bond paper composed of virgin wood fiber with no recycled content. The following additional specifications apply to the type and composition of the recommended paper:

Finish: Smooth Xerography

Sheffield: 100-120 Brightness: 91-94

■ Florescent level: 4%

Moisture content: 4.5%

Packaging: Moisture resistant ream wrap

■ Tolerance for trim and squareness: +/- 0.025"

#### **BALLOT SIZES**

■ 8 ½ x 11-inch

■ 8 ½ x 14-inch

■ 8 ½ x 17-inch

■ 8 ½ x 20-inch

■ 11 x 17-inch (Verity Central only)





# 12. Describe the different levels/types of technical support provided during the initial implementation and for each election moving forward?

Hart has always been a service-centered election company – a trusted partner with an impeccable reputation. With the Verity family of technology, we extend that service-centric focus to you. Verity embodies best practices for security, accuracy, and reliability – for every component and for all data – backed by our extensive, proven support capabilities.

- Technical support Hart support personnel are fully trained in the technical aspects of Verity technology and are supported by technical team of experts at our Customer Support Center.
- **Project management** Hart Project Managers **listen** to our customers and are intent on meeting your expectations.
- Training and documentation Hart's professional educators have experience
  in elections procedures, instructional technology, software application training,
  working with adult learners, and training for diverse backgrounds. Our
  customer training program is designed to ensure that election officials can
  manage elections from end-to-end, with as much or as little help as you wish.

Hart has successfully implemented Verity Voting for jurisdictions of all sizes. This experience, along with our established implementation methods, means we will lead you through a successful transition to the new system. We see to it that every aspect of Verity Voting is functioning to specification and that your people are trained for competent and confident performance - both during implementation and through your first election. We have a reputation for quickly and thoroughly addressing customer concerns, and support is available from our knowledgeable Customer Support Center 24/7.

We are committed to implementing your new voting system as efficiently as possible, while taking the time to ensure success.

"The largest reason Lubbock's County Commissioners chose Verity is the great customer service Hart has given us for more than 11 years. We know from experience that the products Hart builds do what they're supposed to do. The choice is a good one, not just from a mechanical perspective, but from a person-to-person one."

- Dorothy Kennedy, Elections Administrator, Lubbock County, Texas





#### **CUSTOMER SUPPORT CENTER**

Hart support personnel are fully trained in the technical aspects of the Verity system and are further supported by technical staff at Hart's Customer Support Center. During and after implementation, the Hart Customer Support Center serves as a comprehensive information source and your primary support resource.



Hart's Customer Support Center has been providing technical and daily process support to our customers across the U.S. since 2002. Our Customer Support Center gets high marks from our customers for being prompt, courteous and always ready to assist. We get the highest approval ratings in the industry, in great part due to our excellent customer support.

Hart provides elections personnel a consistent source for 24/7 help from a knowledgeable Customer Support Consultant via phone or email through our Customer Support Center and Hartline tracking system. Using

these resources, you can submit incidents, requests for repairs, change requests, and enhancement requests around the clock.

Customers of Hart have access to a Knowledge Base series of articles that support continuous education in elections management and Hart voting technology. Our webinar series additionally opens an accessible way for our customers to connect with our experts and intermittently refresh technical knowledge.

The Hart Customer Support Center staff is available live via phone from 7 a.m. to 7 p.m. Central, Monday through Friday. You can also reach a representative outside of these hours by leaving a voicemail. The receipt of a voicemail triggers a call forward to a Customer Support Center staff member, so callers receive prompt service. During major election events, Hart provides extended Customer Support Center hours.

"When I looked for a company that could lead us as we step into the future, Hart was that company. I have observed the various election providers in meetings and demos, and Hart is the company that has the strength – not just in equipment, but in knowledge of elections – to take us to the next level of efficiency and service to our voters."

- Yvonne Ramón, Elections Administrator, Hidalgo, County, Texas; 345,162 Registered Voters

DR-16 DETAILED RESPONSE





- 13. Do you have a standard implementation process or a list of tasks that must be completed during the implementation phases, who is responsible for those tasks and how long each task is expected to take in a county of our size?
  - Mock elections/Pilot projects
  - Resources available to be devoted to this process
  - How many pieces of equipment would be provided for either process?

Yes, Hart has a proven, refined implementation approach defined in four phases that will benefit the County in numerous ways. The phases are explained in detail below and accompanied by a general timeline for implementation for your reference. Training is a key stage in the implementation of Verity Voting and at the close you will gain experience in a mock election on your new system. Hart will deploy a team of experienced professionals to support implementation of Verity in the County; we have provided an organizational chart naming the Hart representatives who will facilitate smooth implementation.

Implementing Verity is a process in which Hart engages closely with the County, and authorized representatives, using the County's own Verity Voting system. Hart will consult with the County to determine the quantities of equipment to deploy during implementation.







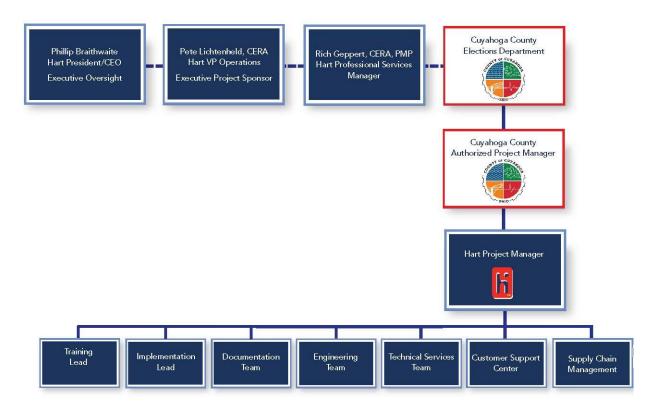
#### **PROJECT ORGANIZATIONAL CHART**

As shown in the organizational chart provided in our response, personnel for the County project will include the following Hart representatives:

**Phillip Braithwaite, Hart President and CEO** will provide Executive Oversight of the project. Mr. Braithwaite leads Hart's mission to provide secure and trusted election solutions through the company's integrity, transparency, efficiency, tenacity, creativity, and dedication to the customer.

Peter Lichtenheld, CERA, Vice President, Operations, as Executive Project Sponsor, will oversee and coordinate accurate delivery of customer-critical services. His management of Professional Services, Ballot Production Services, Technical Services, Product Management and the Customer Support Center is key to exceptional support.

Rich Geppert, CERA, PMP, Hart Professional Services Manager ensures ample project management resources throughout the County's implementation phases. He oversees Hart project managers, trainers, and consultants, in addition to providing oversight and general direction to all Hart voting system implementations.



DR-18 DETAILED RESPONSE





#### **IMPLEMENTATION APPROACH**

Implementing a new voting system is a significant change for all stakeholders, including election managers, elections office staff, poll workers, and voters. When implementing the Verity Voting system, Hart uses a project management approach based on the Project Management Institute (PMI) framework. We have honed this approach over many years of managing election technology deployments, applying best practices and lessons learned to develop a unique methodology that has served our customers well since 2001.

Based on the change management expertise we have gained by implementing voting systems for large and small jurisdictions across the U.S., we propose a phased implementation approach. This approach minimizes risk and positions your jurisdiction for a trouble-free Verity implementation.

We manage projects in four overlapping phases:

Phase I: Planning

Phase II: Implementation

Phase III: Go-Live

Phase IV: Support

#### **Phase I: Planning**

This phase begins with the creation of our proposal and negotiation of the contract, in which we work with the jurisdiction to define and plan the project scope and our approach to its implementation. Once the contract is awarded, the Hart project manager reviews the final proposal and contract; then begins scheduling project setup and initiation activities. The project manager coordinates a project kickoff meeting with your jurisdiction's designated project manager and team, and begins compiling the following components of the comprehensive Project Work Plan and Schedule:

- Scope definition. Summary of the scope of the project as defined in the final
  proposal and contract documents, identifying all the components necessary to
  meet your jurisdiction's requirements
- Project Team. Identification of key individuals, including their roles and responsibilities
- Communication Plan. Project team members and management staff contact information, proposed schedule and format for regularly scheduled project





management meetings, escalation protocol for critical communications, and proposed schedule and format of written communications such as meeting notes, required reports, and other materials

- Schedule. Identification of timeframes and key milestones
- Test Plan. Procedures for ensuring that the software integration operates successfully in your jurisdiction's environment
- Quality Management Plan. Identification of performance standards, triggers, remedies, and escalation protocol
- Change Control Plan. Procedures for identifying, reviewing, and approving changes to the Project Work Plan and Schedule
- Integration Plan. Identification of required work packages and processes
  based on defined scope, as well as any related requirements and expectations
  including shipping and delivery, asset management, system acceptance,
  deployment planning, on-site support, equipment retrieval (post-election),
  equipment processing (post-election) and equipment maintenance
- **Migration Plan.** Roadmap for efficiently incorporating Verity into your election processes
- Risk Management Plan. Initial identification of known risks, risk mitigation strategies and contingency plans
- Issue Management Plan. Procedures for identifying, tracking, and resolving project issues, such as escalation protocol and identifying known open issues
- Training Plan. Refinement of proposed training plan, including identification
  of attendees for each course, coordination of logistics, and localization of
  training curriculum

The Project Work Plan and Schedule provides guidance for managing the project and developing detailed activities, tasks, and timelines. The Project Work Plan and Schedule is revised as necessary to properly manage the project. A working draft of the Project Work Plan and Schedule is reviewed in the project kickoff meeting to promote the refinement and mutual acceptance of the plan.

The Hart project manager is responsible for engaging the resources necessary to execute the Project Work Plan and Schedule, and for the implementation of custom processes needed to meet your requirements.

Successful deployment of a new system depends on a mutual understanding of your current processes and objectives. Therefore, we engage your jurisdiction's elections

DR-20 DETAILED RESPONSE





staff in collaborative planning. This enables us to establish a detailed Integration Plan that addresses all aspects of the project. The results of the collaborative planning activities are used to develop a Migration Plan, which defines each step necessary to incorporate the use of the Verity Voting system in your jurisdiction's election process, while addressing risk areas and carrying out mitigation activities defined by the Risk Management Plan.

#### **Phase II: Implementation**

This phase includes placing orders, delivering equipment, your acceptance of equipment, storing equipment, and completion of third-party warranty information. During this phase, Hart's project manager works closely with your jurisdiction's team to implement the Project Work Plan and Schedule, identify and resolve issues, manage risks, monitor Hart's performance, and ensure clear communication with the entire project team.

This phase also includes initial on-site training of your jurisdiction's staff. Other key activities include initial system configuration, acceptance testing, and preparation of voter education materials (if applicable). All these activities continue through the first scheduled election.

#### Phase III: Go-Live

Following acceptance testing, the project enters Phase III: Go-Live, which includes election-specific data management, deployment plans, voter education, final training, Election Day field support, Election Night reporting, data archiving and management, post-election auditing, and storing equipment in preparation for the next election on the calendar.

During this phase, the Hart project manager focuses on helping you run a successful and controversy-free election and preparing you and your team for future successful, independently-managed elections. Upon completion of your jurisdiction's first election, Hart's project manager coordinates with your jurisdiction's team to prepare and conduct a project review and debrief — a detail-oriented meeting which summarizes and documents the success of the election, the accuracy of the Project Work Plan and Schedule, the project team's performance, project highlights, key issues and their resolution, lessons learned and best practices, and recognition of key contributions. Additionally, Hart's project manager makes certain that you and your team are ready for the next phase of the implementation: Support.





#### **Phase IV: Support**

During and after implementation, the Hart Customer Support Center serves as a comprehensive information source and support resource. The Hart project manager coordinates with the Customer Support Center as needed throughout the implementation. Once implementation is complete, the Customer Support Center becomes the primary support resource for you and your staff.

Hart provides customers with a consistent source for 24/7, real-time help from a knowledgeable customer support consultant via phone or email through our Customer Support Center and Hartline tracking system. Using these resources, you and your jurisdiction's elections staff can log problems and find their solutions, register change and enhancement requests, and submit equipment for repairs – any time day or night.

#### **BENEFITS TO CUYAHOGA COUNTY**

Hart's approach will benefit the County:

Maximizes efficiency and minimizes risk. Based on our change management expertise gained by implementing voting systems for large and small jurisdictions, our phased approach minimizes risk and positions your jurisdiction for a trouble-free implementation.

Minimizes training required – everyone up to speed fast. Verity's integrated, intuitive, user-friendly interfaces and workflows minimize training requirements – saving the County time and money.

Enables the County to conduct elections independently. Hands-on training courses emphasize real-world activities, enabling the County to independently conduct successful elections with minimal support from Hart.

Project management from a team with boots-on-the-ground experience. Our team has deep experience implement voting systems of all sizes according to the best practices of our proven implementation process.





## 14. Provide a copy of the standard acceptance testing process and procedures for all components of the tabulation system.

Hart has extensive experience partnering with both State and local-level jurisdictions of a variety of sizes to support user acceptance testing. We recognize the importance of this process in accomplishing customer goals. Not only will the County verify that all equipment is received in good working order, but it will also be the first real opportunity that the County staff will have to interact with the equipment on a large scale.

For this reason, Hart has defined a standard set of procedures and documentation that can be used as the starting point for planning and executing this process.

Hart's project manager and subject matter expert will work with the County team to plan the user acceptance test (UAT). The team will review the standard set of procedures, analyze space and resource requirements, and mutually determine the final set of procedures and documentation to be used.

In addition to supporting the planning process, Hart's project manager and subject matter expert will oversee onsite support for the actual UAT events as they occur. Typically, project managers assigned to individual implementations help with managing workflow, answering functional and procedural questions, and providing troubleshooting assistance during UAT, if required.

# SYSTEM ACCEPTANCE AND FUNCTIONALITY TEST PROCEDURES

The following steps represent a high-level description of the typical UAT process.

Set up teams and assignments for each member within each team.
 Teams will vary per implementation, and they will vary depending on the task – an initial acceptance test is much more involved than later functional tests.

Assignments might include:

- Unloading trucks
- Unboxing equipment
- Setting up booths
- Testing (inspect) booths, affixing S/N
- Moving booths to testing area





- Taking down booths
- Testing and labeling battery packs
- Testing voting devices
- Adding equipment to local inventory list
- Testing and loading caddies
- 2. Set up an area where booths will be inspected, and S/N labels will be affixed to booths.
- 3. Assign Verity Key to devices to be tested.
- Perform booth functionality testing per the checklist.
- 5. Check all devices for shipping damage/exterior damage.
- 6. Check all ports for obstructions or damage.
- 7. Turn the voting devices over onto a soft cloth or cardboard. Test and connect battery packs.
- 8. For Verity Scan devices, set up and test ballot box(es). Set the Scan onto its ballot box.
- 9. Insert an unvoted Test vDrive into the voting device.
- 10. Turn the voting device on and observe the screen to confirm battery power.
- 11. Connect the voting device with the AC power cable and observe the screen to confirm AC power.
- 12. Perform calibration testing for each voting device touch screen.
- 13. Perform scanner head calibration testing for each Scan.
- 14. Check the clock and set the time and time zone.
- 15. Display and confirm the software version number.
- 16. Continue to Open Polls.
  - a. Test the poll worker button during this process.
  - b. Test the printer during the process.
- 17. Add a voter and vote a ballot.
  - a. Print a ballot on the Touch Writer.
  - b. Scan a ballot on Verity Scan.





- 18. Test the Access interface on the Touch Writer (vote a ballot using the buttons).
- 19. Test the Access interface's headphone functionality on Touch Writer.
- 20. Test the Access interface's dual switch functionality on the Touch Writer.
- 21. Close or suspend polls and use the button on the report printer to advance the printer paper.
- 22. Power off the voting devices.
- 23. Remove tapes.
- 24. Document the test using the functionality logs or a similar checklist.
- 25. Verify the quantity of each product.

County staff members participate in acceptance testing of software and/or hardware upgrades, using standard testing scripts that Hart provides.





# 15. Are sample L&A Testing procedures available?

- Does your system generate a test deck? If so, is it customizable?
- Is ballot adjudication available with your system?

Yes. L&A procedures are documented in manuals and can be adapted to Ohio law and product requirements.

The Verity Voting system generates a test deck that is customizable to your requirements.

Ballot adjudication is performed from the Verity Central high-speed scanner and ballot adjudication system.

Sample manual pages addressing Logic and Accuracy Testing are provided as a view into the level of documentation the County can anticipate receiving with implementation of Verity Voting.

appendix A: Logic and Accuracy Testing



# Logic and Accuracy Testing (devices and software)

A Logic and Accuracy test (LAT or L&A) is a test of the tabulation accuracy of a voting system. The LAT is designed to verify that, for the election being tested, a vote for any ballot option will tabulate as expected for that ballot option. A Logic and Accuracy test is not a test of device functionality or an acceptance test. State and local guidelines dictate the time frame for performing Logic and Accuracy Tests; however, Hart InterCivic recommends that a Logic and Accuracy Test is performed, at a minimum, before any ballot, in any form, goes to any voter, and that a Logic and Accuracy Test include votes cast on every type of device that will be used to capture cast vote records in the upcoming election (e.g., Verity Scan, Verity Central).

logic and accuracy testing: an overview

I IMPORTANT: All LAT recommendations and procedures presented here are superseded by your State election law, rule, and code.

A properly run LAT tests the logic of tabulation systemwide, and includes the following:

 Voting on devices that capture Cast Vote Records (e.g. Verity Scan), and scanning of paper ballots in Central (if applicable).

Note: In accordance with Hart best practices, the louer writer is aget a required companent in an LAT, since it does not capture Cast Vote Records. Each jurisdiction must, of course, follow state and local guidelines.

 Tabulating the votes in Count and comparing Count application reports to expected outcomes.

When conducting the LAT, consider the following:

- Perform the LAT with Test mode vDrives. Use the vDrive Planning Worksheet and remember to plan for an appropriate number of Test mode vDrives.
- Run the complete LAT from the same Verity Build database used for the Official election.
- In your election database software (e.g. Layout), create an Election Day Polling Place specifically for the LAT and assign all precincts to this polling place. Predefine your LAT device(s) with this Polling Place using Test Mode vDrive(s) created in Build.

161

**DR-26** 





## 16. What end user training is available?

- Train the Trainer, BOE Staff, PEOs
- Cost, length (hours per "class"), class size

# Training is provided to Cuyahoga County as part of your Verity implementation package.

The Hart curriculum has been tested through many successful elections with millions of votes cast. Thousands of election officials and poll workers have experienced first-hand how the Hart curriculum provides the skills needed to master essential tasks from ballot preparation to voting equipment setup to Election Night tabulation and reporting.

While our training solution always begins with a proven standardized curriculum, the curriculum is also continuously refined and tailored to meet the changing needs of Verity Voting system customers.

#### TRAINING MATERIALS

Training courses include operations manuals, training manuals, and a variety of other media, including graphic presentations. All these are designed with a single objective: to help trainees achieve proficiency and self-sufficiency in the tasks required to conduct a smooth, successful election with the Verity Voting system.

Hart supplies these materials to the County in PDF format, for on-screen use and for printing as needed. We also provide standard third-party manuals and paperwork/system documentation with third-party hardware.

### PLANNING THE TRAINING PROGRAM

To tailor the standard curriculum to local requirements, the Hart trainer and project manager perform a training needs assessment as part of the implementation business process analysis (BPA) and variance analysis. The goal in performing this assessment is to identify how best to bridge the gap between existing elections procedures and training, and the requirements of the new Verity Voting system implementation. In this joint activity, **Hart and the County will mutually determine the appropriate size of classes.** 

Typical audiences include permanent and temporary election office staff, information technology (IT) personnel, warehouse staff, and poll worker trainers.





After reviewing the findings of the training needs assessment and variance analysis, the trainer revisits the training plan from the original proposal in order to meet the customer's training needs. Our experienced trainers then identify options for where, when, and how initial training services are conducted. Hart also offers options for follow-up training sessions, including onsite classes, training in Users Group meetings, computer-based instruction, or online training utilizing Web conferencing.

### TRAIN THE TRAINER

Hart has presented Train-the-Trainer sessions in hundreds of jurisdictions across the country since 2002. We have trained hundreds of trainers and tens of thousands of poll workers. Our Train-the-Trainer program starts with all trainees taking the Polling Place Operations course, and then we dive into our training methodology, give trainees the knowledge of the voting system, go into the presentations, flow and agenda of the Polling Place Operations course, and finally practice, practice, practice training others.

# **STAFF TRAINING**

Staff training is a particular strength Hart brings to your implementation and ongoing operation of your new voting equipment.

Hart's training program ensures that permanent and temporary elections office staff, technical troubleshooters and poll workers have the skills required for the County to quickly get up and running with the new voting System – and the ability to provide ongoing, independent, consistently successful elections.

Every member of our friendly, knowledgeable training staff has experience in elections procedures, instructional technology, software application training, and working with adult learners from diverse backgrounds and with variable educational backgrounds. In addition, Hart's comprehensive curriculum has been tested through many successful elections with millions of votes cast, helping ensure that the County's elections staff will be able to confidently implement, manage and operate the Verity voting system.





# Hart will provide the following courses for elections staff:

Course	Description	Duration
Verity Management and Best Practices	Elections staff managers and IT personnel learn how to manage Verity software user permissions and security and transparency options. Attendees also learn overall best practices for use with the Verity system and how to handle PC setup and software upgrades.	4 hours
Verity Data Operator	Elections staff who will work with the Hart ballot production specialist learn how to import data, design, and lay out ballots according to State and County guidelines and for the best voter experience.	2 days
Verity Build Operator	Elections staff learn how to generate ballot databases, program/configure elections for Verity Touch Writer ballot marking devices, Verity Scan, and Verity Central, and print files for offsite printer(s). Elections staff also learn how to create polling place device media.	4 hours
Verity Polling Place Operations	All attendees of any other course participate in the operational aspects of the Verity Scan and the Verity Touch Writer as they are used in the polling place.	2 hours
Assisting Voters with Disabilities	For elections staff trainers and any other attendees who want to know best practices for working with voters with disabilities who use the Verity polling place equipment.	1 hour
Verity Polling Place Train the Trainer	Elections staff trainers who will train poll workers get methodology, skills and practice, practice, and practice teaching the Polling Place Operations course for poll worker audiences.	2 days
Verity Scan for By-Mail Operator	For State and Local elections staff. Covers central scanning operations using Verity Scan devices and processing and adjudication of ballots.	1 hour
Verity Central Operator	Elections staff learn central scanning operations with high-speed scanners, and processing and adjudication of ballots according to applicable guidelines.	1 day





Course	Description	Duration
Verity Count Operator	Elections staff learn how to perform logic and accuracy testing, tabulating results, and generating results reports and exports	4 hours
Support Procedures	Warehouse, management, and IT staff learn how to service and maintain the Verity equipment and system, including acceptance testing, regular equipment maintenance including device calibration, equipment troubleshooting, field and local help desk guidance, and more.	2 days

### TRAINING AVAILABLE AFTER IMPLEMENTATION

The type of training required for system upgrades and/or enhancements varies according to the complexity and scope of the system change. Hart provides updated or new documentation with every upgrade. When we perform an upgrade on-site, we provide in-person "delta" training – instruction in the new procedures and interfaces. If training is needed for more minor changes, we deliver that via webinar. We will work with the County to determine, for each instance, which of the various available options best serves you.

### TRAINING FOR LOGIC AND ACCURACY TESTING

The Verity Build Operator course teaches elections staff how create a test deck. Logic and accuracy testing procedures are specific to the jurisdiction and vary according to the rule and code of that jurisdiction. The Hart project manager and the jurisdiction's elections administrator will establish the logic and accuracy testing procedures for the specific jurisdiction, typically during a process analysis. The procedures that are typically part of any logic and accuracy test (voting ballots, tabulation, and reconciliation) are covered as part of device and software training courses.

DR-30 DETAILED RESPONSE





17. Can you provide us with training documentation and if your system is purchased will you allow us to use your stock photos and edit your procedural documentation to be tailored for use in Cuyahoga County?

Yes. Hart will supply training documentation to the County and allow use of Hart stock photos.

The County will also be granted the right to edit procedural documentation from source files upon agreement by signed affidavit stating that Hart branding will be removed from documentation published by the County.

- 18. Provide a list of known anomalies with the system (technical bulletins released) in all versions of the hardware, firmware, and software of certified product.
  - Include details of any material defects or failures of any part of the system along with the
    election jurisdiction in which the defect or failure was discovered, the nature of the defect or
    failure, how it was discovered and resolved.

There are no known anomalies in Verity Voting as proposed for Cuyahoga County, Ohio.

As a partner in ensuring smooth elections in the County, *if anomalies are identified* Hart issues service bulletins via email. Sent from our Customer Support Center, bulletins provide updates and alerts regarding our products and services.



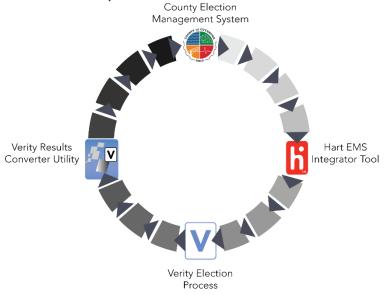


- 19. Is your system compatible with the CCBOE's current voter registration system and Electronic Pollbook systems and has this compatibility been tested and/or used in other election jurisdictions?
  - Can the system to be updated to be compatible with future voter registration systems the CCBOE may obtain?
  - Describe the middleware system that is used in between the tabulation system DIMS/Precinct Central (Tenex).
  - Is it compatible with the certified Remote Marking Systems? Cuyahoga uses Democracy Live specifically

Yes. Verity is compatible with the system in use in the County. Hart has experience in the State of Ohio and has been working with Hamilton County for many years; the County is planning implementation of Verity Voting in January 2019. To date, we have integrated with the Tenex pollbook system in Hamilton County.

Hart routinely engages with best-in-class providers, including Democracy Live. The same election definition from Verity can be "ported" to a third-party accessible remote marking system with minimal re-work or duplication. Verity includes the ability to import a file containing a marking pattern for a ballot and then print a Verity ballot marked with that pattern. This allows remote marking systems to integrate with Verity (which is otherwise a kiosked, air-gapped system).

We are experienced with creating custom middleware on both ends of the system and can do the same for the County.



#### **SEAMLESS EMS INTEGRATION**

Verity eliminates manual steps, simplifying import of election data for ballot layout and election definition as well as export of election results for statewide reporting.

DR-32 DETAILED RESPONSE





20. Does the system have the ability to be re-configured and customized to accommodate needs that change or evolve overtime, especially those required by new laws?

Yes. Hart will always work with you to accommodate the laws of the State of Ohio to ensure compatibility with Verity Voting. We will pursue customizations determined to be necessary and note that changes will be assessed with consideration for State of Ohio certification requirements.

Verity is flexible enough to **leverage new technologies over time** and includes all the functionality dictated by federal certification requirements.

Verity is a common platform and incorporates universal design across all devices. Key hardware components of the Verity Voting system use common parts and are integrated into the entire system design, to provide adaptability, a robust supply chain, and efficient maintenance.

21. Do you have a standard maintenance and upgrade schedule for new system releases and patches, including any additional costs associated with maintenance and upgrades or equipment repairs?

Hart has established maintenance schedules for Verity devices – and they are listed on stickers inside the device case. Typically, maintenance tasks would be performed by the County.

Verity has been designed to require very little preventative maintenance. Hart will not need to perform any maintenance on your system, unless you choose to have us do so instead of doing it yourself. **This independence from your vendor results in options for efficiency and cost savings.** 

Hart trains local jurisdiction technical staff to perform these simple, routine maintenance tasks, and we provide step-by-step instructions as part of your Verity documentation. Maintenance tasks for Hart-manufactured Verity components include:

- As needed Clean display.
- Every 500 sheets Clean scanner.
- Recommended annually Calibrate touchscreen.
- Annually Perform scanner calibration diagnostic procedure.
- Annually If a screen protector is installed, check its condition.
- Every 3 years Replace coin battery in tablet.
- Every 4 years Replace rechargeable backup battery in tablet.





Third-party manufacturers provide maintenance for products such as high-speed scanners and printers that are included in your Verity configuration. Maintenance schedules for third-party products vary. Between visits from manufacturer-certified technicians, you perform only standard cleaning. Hart works with you to coordinate the third-party service contracts required for maintaining these third-party components.

#### **ROUTINE AND PREVENTATIVE MAINTENANCE FOR VERITY COMPONENTS**

# Routine and preventative maintenance for Verity Scan

Maintenance		
Туре	Action	Frequency
Routine	Clean display	As needed
Routine	Clean scanner	Inspect/clean scanner after every 500 sheets
Routine	Calibrate touchscreen	Annually
Routine	Check condition of screen protector (if installed)	Annually
Routine	Perform scanner calibration diagnostic procedure	Annually
Routine	Replace rechargeable backup battery	Every four years
Preventative	Replace coin battery in tablet	Every three years

# Routine and preventative maintenance for Verity Touch Writer

Maintenance Type	Action	Frequency
Routine	Clean display	As needed
Routine	Calibrate touchscreen	Annually
Routine	Check condition of screen protector (if installed)	Annually
Routine	Replace rechargeable backup battery	Every four years
Preventative	Replace coin battery in tablet	Every three years

DR-34 DETAILED RESPONSE





#### Preventative maintenance for the Canon DR-G1130 high-speed scanner

Hart has partnered with multiple vendors to provide a high-speed scanning solution. Preventative maintenance is typically performed on high-speed scanners according to a schedule based on the number of sheets scanned. The more sheets scanned, the more often preventative maintenance is performed.

For the Canon DR-G1130 high-speed scanner, preventative maintenance is performed by a technician certified by the manufacturer. Between scheduled preventative maintenance visits, the user performs only standard cleaning and light-duty maintenance typical of any device of this type.

## 22. Provide details of the Audit logs generated by each part of your system.

- Are all user actions logged?
- Are the audit logs unencrypted and able to be printed and exported?
- What is the default format?

The Verity solution ensures that auditing your election results is efficient and easy, with ready access to scanned ballot images, and granular focus on corresponding cast vote records, at the level you need.

Throughout all phases of operation, all Verity system components maintain complete audit logs. Every Verity device and application logs all user authorization/authentication, data entry, user interaction, and system events. Election managers can print or export audit logs from each device and application. Not every vendor's solutions include this comprehensive, built-in auditing capability.

### PRINTABLE AND SEARCHABLE AUDIT LOGS

Verity ensures that auditing your election results is efficient and easy, with ready access to scanned ballot images, and granular focus on corresponding cast vote records, at the level you need.

Throughout all phases of operation, all Verity system components maintain complete audit logs. Every Verity device and application logs all user authorization/authentication, data entry, user interaction, and system events. You can print or export application logs from each device and application. In addition, all audit log reports can be easily exported in CSV format, which enables you to





easily analyze, search, and filter the reports through COTS third-party applications for purposes of data mining.

On Verity Touch Writer and Verity Scan voting devices, audit logs and cast vote records are redundantly stored to the vDrive and to a partition on the compact flash card. When the vDrive is read into the Verity Count tabulation and reporting application (or electronically transferred there via Verity Relay), the audit logs are transferred to the datastore for that election.

It is easy to access and print audit information about every component of the system in a highly readable format – audit information is not hidden in a "black box."

### **AUDIT LOGS AND DETAILS**

On the Verity Touch Writer voting device, audit logs are redundantly stored to the vDrive and to a partition on the compact flash card. The audit log for each device includes a record of each event occurring on the device, including:

- Date and time of the event
- Option selected by the voter where applicable
- Action performed on the unit
- Tabulation input events
- Device serial number.



When the vDrive is read into the Verity Count tabulation and reporting application, the audit logs are transferred to the datastore for that election.

In addition, each device generates a QR code printed from the onboard thermal printer. This QR code has information embedded, including the destination of that device, the election loaded on the device, and the ID of the inserted vDrive.



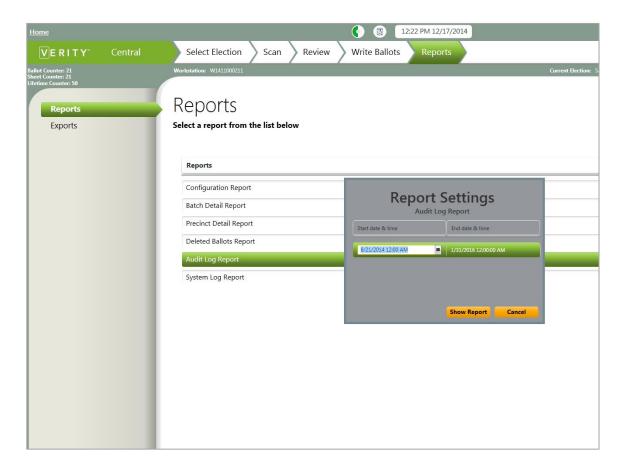
Verity Central's audit log includes the Verity user's login ID and a record of all resolution decisions, providing a complete record of the adjudication process.

Verity Central also supports highly filterable ballot image searches and access to original and annotated ballot images.

DR-36 DETAILED RESPONSE







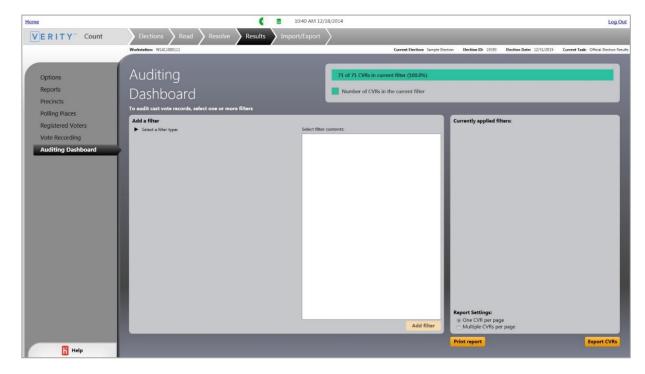
When all ballots have been scanned and resolved, Verity Central writes cast vote records (CVRs) to vDrive portable flash media. CVRs can then be tabulated in the Verity Count tabulation and reporting software.







Verity Count can produce a variety of standard and customized reports. Verity Count can be used in conjunction with, and as a supplement to, polling place reporting of precinct results, and as an additional consolidation and auditing tool (because Verity Count receives audit records from all voting devices).



Verity Count also includes intuitive, easy to use dashboards to perform postelection audits, in a highly filterable way.

Audit procedures are covered in the following training courses: Verity Count, Verity Central, Management and Best Practices.





- 23. Briefly describe all results reports the system can generate and provide sample copies of such reports.
  - Can customized reports be designed and will our staff have the ability to customize without vendor involvement?
  - Are the reports searchable or available to be exported into other document formats?
  - Can the reports easily be exported for web viewing?
  - What is the standard/default format used?

Verity's integrated reporting engine produces a variety of standard, pre-defined reports. You can also easily design user-friendly customized reports from within the application interface – without professional data processing assistance or the use of an external tool or report writer. Reports can be run at any time and printed directly to a connected commercial-off-the-shelf desktop printer or exported to searchable, re-purposable formats such as PDF, CSV and XLSX. While Verity is never connected to the Internet, as a user of Verity Voting, you will be able to export reports that may be published, at your discretion, to channels such as "the web", as noted in the above question.

#### **VERITY COUNT – STANDARD REPORTS**

Count

Verity Count (tabulation and reporting software) reports include the following standard reports:

- Canvass
- Cumulative
- Precinct
- Write-In Status
- Precincts Reporting
- Audit Log
- Flash Memory
   Device (vDrive)
   Status
- Device Log
- Voting Devices

| Canvass Results Report
| Description | Des





- Polling Places
- Alias
- Manual Vote Recording
- Residual Votes



### Verity Build (election definition and deployment software) reports:

- Jurisdiction Configuration Report
- Polling Place List, Summary
- Polling Place List, with Details
- All Contests
- Contest Associations
- Ballot Style Associations
- Rotation Report
- Ballots Printed
- Flash Memory Devices (vDrives) Created



# Verity Central (high-speed scanning and on-screen ballot adjudication) reports:

- Configuration
  - Batch Detail
- Precinct Detail
- Deleted Ballots
- Audit Log
- System Log

## **CUSTOM REPORTS**



You can easily design customized reports from within the Verity application interface -- without professional data processing assistance or the use of an external tool or report writer. Verity Count enables you to create custom reports based on filtered data (such as only certain precincts or contests).





# 24. Do you provide printing services for a county of our size?

In accordance with Ohio State law, a vendor must have a printing location in the State in order to handle this task. Hart does not meet this print vendor requirement.

There are multiple printers in Ohio capable of printing the Hart ballot. We will work with the County to identify the best possible solution.





This page intentionally blank.





# **VERITY VOTING SYSTEM**



Hart is privileged to have the opportunity to present the Verity Voting system for your consideration in the County of Cuyahoga.



Our proposal comprises the Verity® Voting system, hardware and software components in the optimum configuration for the County with everything needed to efficiently and cost-effectively conduct successful elections for years to come. Built on a decade of voting technology experience, Verity is a voting system that is easy to use, versatile, trustworthy and instills a true sense of confidence among voters.

Hart's two Options for Cuyahoga County are defined on the following pages.

Verity is federally certified by the U.S. Election Assistance Commission (EAC) and by the Ohio Secretary of State.

Hart and Verity together are your voting solution for the future of secure, modern voting in Cuyahoga County, Ohio.

VERITY VOTING SYSTEM VV-1





## **OPTION 1 – PRE-PRINTED BALLOTS**

Option 1 is configured with the following assumptions:

- Election day ballots will be pre-printed and delivered to polling locations
- Absentee In Person ballots will be printed on demand
- 2 Verity Scan digital ballot scanners per polling location
   Additional scanner added for the Parma Heights Baptist Church and
   Wylie Heights Athletic Center (692)
- 1 Verity Touch Writer ballot marking device per polling location for ADA voters (345)
- 4 Verity Scan digital scanners and 4 Verity Touch Writer ballot marking devices for Absentee In Person voting
- 22 Verity Print on-demand printers
   To be used during Absentee In Person voting
- 4 Verity Central high-speed digital scanners
   To scan absentee by-mail ballots
- Verity software
- All computer hardware and accessories
- Includes Delivery, Training, Project Management and Implementation Services
- Spare equipment: Verity Scan digital ballot scanners (69 units); Verity Touch Writer ballot marking devices (35 units)



VV-2





# **OPTION 2 – ON-DEMAND PRINTING OF BALLOTS**

Option 2 is configured with the following assumption:

- All ballots will be printed on-demand for Election Day and Absentee In Person voters
- 2 Verity Scan digital ballot scanners per polling location
   Additional scanner added for the Parma Heights Baptist Church and Wylie Heights Athletic Center (692)
- 1 Verity Touch Writer ballot marking device per polling location for ADA voters (345)
- 2 Verity Print on-demand printers per location For on-demand ballot printing.
  - 1 additional Verity Print added in polling locations with 4-8 Precincts
  - 2 additional Verity Print added to polling locations with 9-12 Precincts (732)
- 4 Verity Scan digital scanners and 4 Verity Touch Writer ballot marking devices for Absentee In Person voting
- 22 Verity Prints on-demand printers
   To be used during Absentee In Person voting.
- 4 Verity Central high-speed digital scanners
   To scan absentee by-mail ballots
- All Verity software
- All computer hardware and accessories
- Includes Delivery, Training, Project Management and Implementation Services







# **VERITY SOFTWARE**

Our proposed Verity Voting turnkey election management system includes the following software:



**Verity Data** election data import/management and ballot design software (Bundled with Verity Build)



Verity Build election definition and deployment software



Verity Central high-speed scanner and vote capture/ballot adjudication software



Verity Count tabulation and reporting software

Each software component is described in detail below.

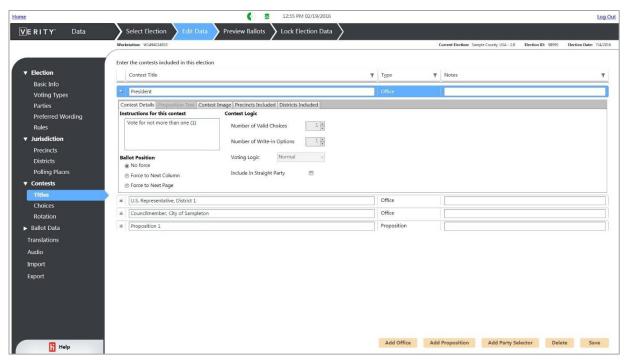






# VERITY DATA ELECTION DATA IMPORT/MANAGEMENT AND BALLOT DESIGN SOFTWARE

Verity Data is bundled with Verity Build. From Verity Data, you can import any election data from other software infrastructures and produce datasets in a format compatible with the Verity Build election definition software. Verity Data accepts jurisdiction- and election-related data through a fresh, modern, highly usable interface. Verity Data and Verity Build offer the flexibility to easily make changes until the election definition is finalized and deployed – with WYSIWYG ballot views and **no programming s**kills required. And with Verity, you <u>build your ballots once</u> for all devices – all devices use the same ballots.



Ballot layout formats support best practices authored by EAC/AIGA Design for Democracy styles, as well as recommendations from the Brennan Center for Justice.

### Verity Data Advantages

 No coding required. Verity Data's easy interface requires no specialized training – anyone can learn to lay out ballots that meet the jurisdiction's needs.





- Real-time WYSIWYG ballot previews. Elections staff can view ballot previews at any time during the ballot layout process no need to take ballot data to a separate application to see how the ballot will look.
- **Flexible ballot formatting.** Verity Data includes multiple ballot templates for up to four-column ballots, with the ability to add rich text and images.
- Powerful import and export functionality. Election data can be imported into the system and finalized data can be easily exported for future use or backup, resulting in significant time savings.
- Built-in multi-language capabilities and audio recording. Verity can manage text translations and audio recording within the Verity Data software application, saving time no need to use separate applications.
- Build your ballots once for all devices. All devices use the same ballots.

VV-6 VERITY VOTING SYSTEM

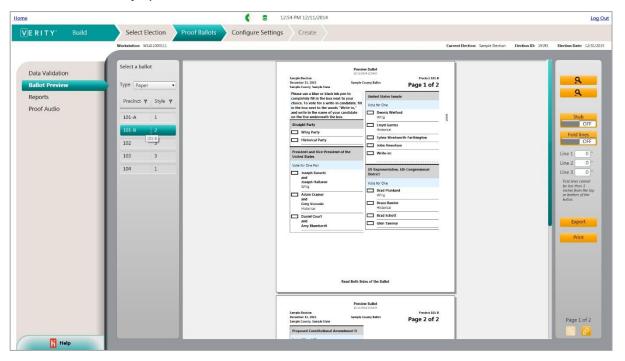






# VERITY BUILD ELECTION DEFINITION AND DEPLOYMENT SOFTWARE

Verity Build is the Verity Voting software application that enables users to proof ballots created in Verity Data, define (or "lock down") ballot styles, and generate and deploy election definitions.

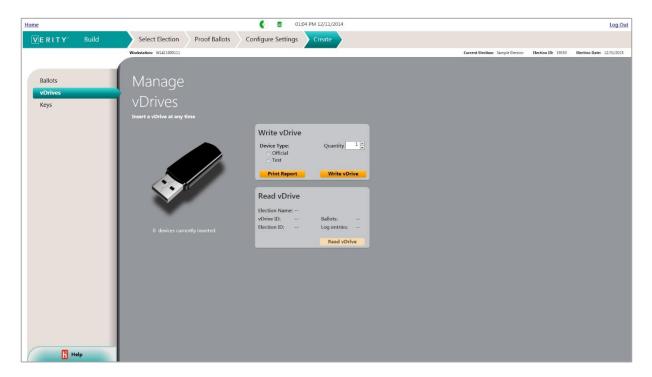


VERITY VOTING SYSTEM VV-7





In addition to producing paper and electronic ballot styles, Verity Build allows users to program voting device behavior in a variety of ways. After ballot generation, Verity Build electronically writes the election data file (including all ballot styles) to portable flash media vDrives, which can then be deployed for a variety of different voting types, including polling place voting with Verity Touch Writer and Verity Scan, or central scanning with Verity Central.



After generating election definitions, Verity Build can also output ballots to a printer or to a PDF file for third-party printers. Verity Build is scalable, to accommodate multiple networked ballot printing client workstations, if desired.

### Verity Build Advantages

- Build your election once for all components for any voting type. Program, proof and print your own ballots no vendor help is needed.
- **Get up to speed fast.** With Verity Build's user-friendly interface, you don't have to be a programmer to define and deploy an election.
- **Flexible efficiency.** Deploy your election with the election type, ballot sizes, device settings and many other options you choose.

VV-8 VERITY VOTING SYSTEM





- Quick, accurate ballot and data proofing. Clear onscreen renderings let you preview ballots by precinct style and make corrections in real time.
- Automated test deck. With Verity Build's import of test deck marking patterns, staff no longer spends hours or days hand-marking ballots for logic and accuracy testing.

### Verity Build features and functions

- The interface has the same look-and-feel as all the other software components of the voting system.
- Enables elections staff to program, proof and print ballots, with no programming skills required and with no vendor help needed.
- Enables elections staff to deploy the election with the election type, ballot sizes, device settings and other options they choose.
- Provides a full-sized ballot for use by all voters, with no separate ballots required for voters with special accessibility needs.
- Provides election definitions that are universal and can be used in any vote capture device in the system and for any combination of precincts, including as few as a single precinct split or as many as all precincts for the election.
- Enables the creation of an automated test deck, so no hand-marking ballots for logic and accuracy testing is required.
- Imports any election data from other software infrastructures (such as state databases) and exports finalized data for future use or backup.
- Enables elections staff to easily make changes until the election definition
  is finalized and deployed with WYSIWYG ballot views and no
  programming skills required, and with no need to take ballot data to a
  separate application to see how the ballot will look. Staff can use the
  software application to make corrections in real time.
- Enables elections staff to proof ballots, define ballot styles, and generate and deploy election definitions.
- Includes options that enable elections staff to design ballots and define
  elections to comply with specific and varied election needs, with features
  that enable, for example, specific undervote rejections, write-in images
  printed at the polling place, and results printed by votes received.





- Provides the ability to output ballots to a COTS printer or to a PDF file for third-party printers.
- Scalable, to accommodate multiple networked ballot printing client workstations.
- Enables elections staff to build the election once for all components for any voting type.
- Includes multiple ballot templates for up to four-column ballots, with the ability to add rich text and images.
- Supports a central database of election information for use in ballot design and election definition.
- Provides the ability to record audio and to import synthesized speech, with built-in text translation and audio recording. Text translations and audio recording are done within the application – no need to use separate applications.
- Includes the following security/privacy features for paper ballots:
- Unique identifiers
- Human readability
- Ballot inventory numbers
  - Ballot layout formats supports best practices authored by EAC/AIGA
    Design for Democracy styles, as well as recommendations from the
    Brennan Center for Justice.





# VERITY CENTRAL – HIGH-SPEED SCANNER AND VOTE CAPTURE/BALLOT ADJUDICATION SOFTWARE



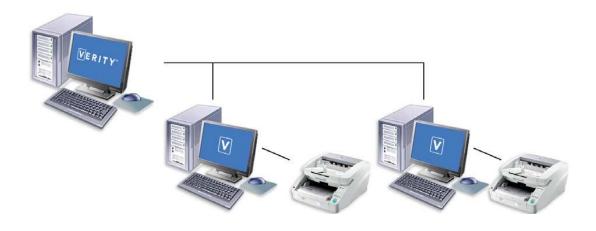
Verity Central is Hart's second-generation digital scanning and online adjudication solution, comprising a high-speed scanner and Verity Central software application, for high-speed scanning of absentee/by-mail ballots.

Verity Central is scalable, with the ability to accommodate multiple networked scanning client workstations.

Verity Central does not tabulate votes – it simply scans and records cast vote records. Tabulation is performed later, with the Verity Count application. Where allowed, this enables jurisdictions to begin scanning any time before the close of polls on Election Day – even days or weeks in advance – thereby greatly accelerating results reporting on Election Night.

# Verity Central high-speed scanner

Verity Central's Hart-integrated commercial-off-the-shelf (COTS) scanner is available in a variety of models to meet each jurisdiction's exact needs, providing easy maintenance and lower costs. In addition, Verity Central is scalable, with the ability to accommodate multiple networked scanning client workstations, if desired.



VERITY VOTING SYSTEM VV-11





# VERITY CENTRAL VOTE CAPTURE AND BALLOT ADJUDICATION SOFTWARE

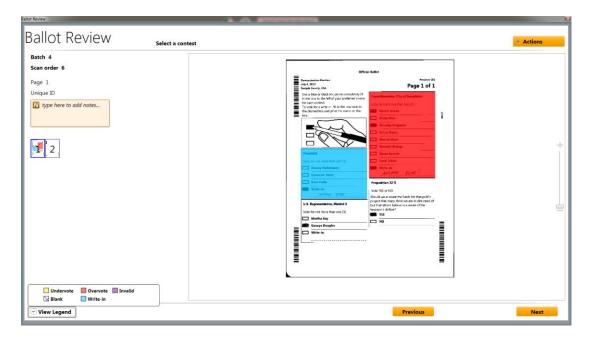


The Verity Central software application works with the Verity Central Hartintegrated Canon scanner to provide high-speed capture of cast votes.

Verity Central's onscreen digital adjudication features are especially powerful and noteworthy. Instead of forcing users to outstack and hand-count ballots with questionable voter marks as is the case with older systems, you can resolve ballots by means of Verity Central's innovative, user-friendly onscreen adjudication process. While other vendors promote their systems' so-called "adjudication" features, only Verity Central uses second-generation digital imaging to provide true onscreen adjudication of individual contests and choices with advanced features for efficiency and ease of use.

Contests with marks that require attention (overvotes, undervotes, invalid marks, blank ballots) are color-coded, enabling authorized users to easily determine the disposition of unresolved marks without needing to re-make and re-scan outstacked ballots. Verity Central greatly boosts efficiency and accelerates reporting of results.

**Note:** Adjudication of **write-ins** can be deferred to the Verity Count tabulation and reporting software instead, if desired.



VV-12 VERITY VOTING SYSTEM





Verity Central's color-coded, user-friendly interface enables fast, reliable on-screen adjudication of unresolved ballots.

Verity Central also supports robust auditability, with highly filterable ballot image searches and access to original and annotated ballot images.

When all ballots have been scanned and resolved (or deferred to Verity Count), Verity Central writes cast vote records to vDrive portable flash media for transport to the Verity Count tabulation and reporting software.

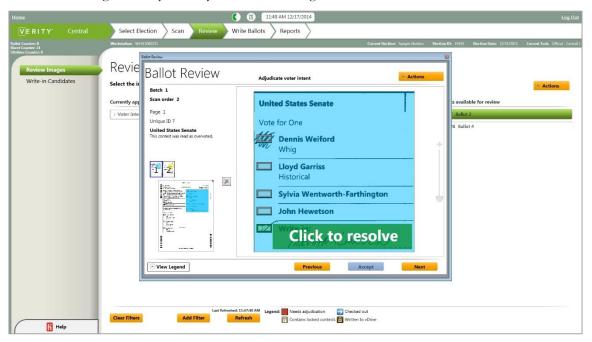
VERITY VOTING SYSTEM VV-13





# Verity Central Advantages

- Next-generation digital scanning and online adjudication system. Verity builds on the lessons learned from the past decade and the result is the easiest, most transparent, and most efficient high-speed scanning system available.
- True onscreen adjudication. Only Verity enables you to easily resolve all
  voter intent issues onscreen, contest-by-contest, with clear, color-coded
  flags and plain-language instructions.
- Transparency and easy auditability. With an unmatched variety of image filters, you easily locate ballot images.



- No presorting. Scan multiple precinct styles in the same batch, in any orientation.
- **No outstacking and rescanning.** Preserve ballots in their original form, with minimal handling.
- **Reduced training time.** User-friendly interface has the same look-and-feel as other Verity Voting system components, for shorter training time and lower training costs.
- Versatile for long-term value. Verity Central is part of the holistic, scalable Verity Voting solution that can adapt as your needs change.







### **VERITY COUNT TABULATION AND REPORTING SOFTWARE**

Verity Count is the certified Verity software application that tabulates and reports cast vote records stored on flash memory modules (vDrives). Verity Count provides reporting capabilities for a wide variety of system information gathered from other voting system components including devices we've introduced for Ohio, such as: Verity Scan; Verity Touch Writer; and Verity Central.

Verity Count can be used in conjunction with, and as a supplement to, polling place reporting of precinct results, and as an additional consolidation and auditing tool because Verity Count receives audit records from all voting devices and can produce a variety of standard and customized reports.



### **VERITY COUNT USER-FRIENDLY DASHBOARDS**

Verity Count includes intuitive, attractive, easy-to-use dashboards to monitor progress on Election Night, or to perform post-election audits, in a highly filterable way.

VERITY VOTING SYSTEM VV-15





### Verity Count Advantages

Verity Count's advantages over solutions provided by other vendors include:

- Election Night dashboard. A single dashboard shows progress toward completion, so elections staff do not need to sift through multiple reports to see and track progress, improving reporting efficiency.
- Flexible, customizable reports to meet specific needs. In Verity Count, a long list of filters enables elections officials to easily select the data to be included in reports, with the ability to customize report headers. Verity Count offers an unparalleled number of filters that allow you to specify exactly what data to include in reports.
- Election officials have control over precinct reporting. Precincts can be specified as Not Reporting, Partially Reporting, or Reporting.
- Auditing dashboard enables easy CVR data export. With a robust list
  of user-defined filters, data exports as raw XML data or in human-readable
  PDF reports. This feature of Verity Count increases auditability, reduces
  risk, and increases transparency and voter confidence. No other vendor
  offers such an easy-to-use dashboard for exporting data according to
  highly-customizable filters.
- **Customized precinct groups.** Verity Count enables elections officials to group precincts in reports and assign new labels. Verity gives officials more control over precinct reporting than any other system.
- Customized column display. Verity Count provides options to customize reports, including: show/hide columns, rename columns, group columns and assign new labels. Verity provides more control over how to present data in reports than is available from other vendors.
- User-friendly audit log review. When vDrives are read into Verity
  Count, Verity Count also captures the audit logs from Verity Touch Writer
  and Verity Scan in-person voting devices, to facilitate easy review of all
  audit log information from a single location.





# **VERITY VOTING HARDWARE**

Our proposed Verity Voting solution for Ohio includes the following hardware:

### **Verity Print –On-demand Printing**

Verity Print prints paper ballots on the spot, for in-person absentee voting. Verity Print is easy to learn and easy to use, with a plain-language interface as on all components of the Verity Voting system.



# Verity Touch Writer, with Access – Accessible Ballot Marking Device

Verity Touch Writer is an accessible paper ballot marking device that provides superior usability and accessibility at the polling place. Most importantly, Verity Touch Writer provides true equality of access, with the same paper ballot for all voters.



# Verity Scan - Digital Ballot Scanner

At the polling place, after marking a paper ballot, the voter feeds the ballot directly into Verity Scan.







#### **VERITY PRINT – ON-DEMAND PRINTING**

Verity Print is an easy-to-use printing solution for on-demand and accurate ballots.

Verity Print prints ballots on the spot at the polling location and is used for absentee in-person or early voting in precincts or central elections offices. Purpose-built for printing ballots as needed, Verity Print is easy to learn and easy to use, with the same simple, plain-language interface as all other components of the Verity Voting system.



**Verity Print is a low-cost solution** – ballots are printed on COTS paper, and there are **no per-ballot click charges.** Compact and lightweight, the Verity Print device is easy and inexpensive to transport and store.

See **Detailed Response: Tabulation Vendor** | **Initial Survey, 11.** for our ballot stock recommendation.

#### **Verity Print Advantages**

**Easy, compact, affordable.** Prints ballots on demand at the polling place or central office for early voting, Election Day, vote centers, absentee/by-mail voting.

**Delivers the right ballot – fast.** The right ballot is always at hand, printed on the spot.

Eliminates risk of under/over estimating ballots required. Prints from one to 99 ballots at a time, at the polling place, as they are needed.

**Easy to transport and set up.** Compact and lightweight, the Verity Print device is easy to transport in ordinary vehicles and easy to set up at the polling place. And Verity Print's compact size means less storage space is required.

VV-18 VERITY VOTING SYSTEM





Affordable. Prints full ballots on COTS paper. No waste, and no per-ballot click charges.



**PRINT ON-DEMAND IN THE POLLING LOCATION** 

Ballots can be accurately printed in quantity on Verity Print if needed by selecting the ballot style.

**Prints immediate ballot count reports.** An onboard thermal printer can print ballot count reports that facilitate reconciliation of paperwork – and it's easy to change a roll of paper – drop it in.



**PRINT COUNT REPORTS IN VERITY PRINT** 

On closing the polls, reports can be printed directly on Verity Print.

VERITY VOTING SYSTEM VV-19





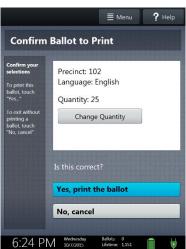
**Reduces training costs.** User-friendly interface has the same look-and-feel as other Verity voting components, for shorter training time and lower training costs.

**Integrates with electronic poll books.** Enables generating ballots automatically from electronic poll book ballot style reports, using optional AutoBallot barcode scanner.

Easy to start up and shut down in minutes, with the Verity Print simple, plainlanguage, step-by-step onscreen instructions.

**Easy to learn and use.** Verity Print has a simple, plain language interface based on the same Design for Democracy look-and-feel as all other components of the Verity Voting system. If poll workers learn one device, it's just as easy to learn how to use other Verity devices.





#### **VERITY PRINT PLAIN LANGUAGE PROMPTS**

Operator prompts are clear and in plain language.

**Ensures continuity of voting**. Built-in power supply means the device can continue to operate in the event of a power loss.

Lower total cost of ownership. The compact size of Verity Print is a uniform design feature of the Verity Voting system that saves storage space and reduces transportation costs. Setup at the polling place is easy for anyone – reducing staffing costs. And Verity Print requires very little maintenance – another great feature of Verity Voting.

No click charges. No per-ballot click charges – reducing costs over time.

No proprietary ballot stock. Prints full ballots on COTS blank paper, not costly proprietary ballot stock.





**Reduces training costs.** User-friendly interface has the same look-and-feel as other Verity voting components, for shorter training time and lower training costs.

**Versatile for long-term value.** Accommodates almost limitless ballot styles and is suitable for a variety of applications, so it's adaptable if your needs change. And you can choose from available COTS printers the one that best fits your needs and budget now, with the flexibility to scale up in future as necessary.

**Lifecycle longevity.** Because it's early in its lifecycle, Verity Print promises many, many years of cost-effective service.





# VERITY TOUCH WRITER WITH ACCESS— ACCESSIBLE BALLOT MARKING DEVICE

Verity Touch Writer is an accessible paper ballot marking device (BMD) that provides superior usability and accessibility at the polling place. Most importantly, Verity Touch Writer produces the same ballots as those used by all voters, whether in the polling place or by mail, providing true equality of access. There are no segregated ballots, and no bottlenecks that can result in long lines at the polling place as can happen with "all-in-one" devices.

For reduced cost and easy maintenance, Verity Touch Writer is paired with a Hartintegrated COTS printer. After the voter uses the touchscreen to mark and review selections, the device prints a marked, full ballot from blank, non-proprietary stock.

Verity Touch Writer's interface is based on EAC/AIGA Design for Democracy styles, with a clean look and intuitive, plainlanguage instructions.



Verity Touch Writer includes an integrated, compact, durable storage case for secure, easy transportation and storage.

Using Verity Touch Writer in

conjunction with the Verity Scan portable digital ballot scanning/tabulation device provides the voter with a complete, reviewable paper ballot that is accurately captured via scanning, reviewing, and acceptance for tabulation as the voter's cast vote record.

Verity Touch Writer provides audio ballot capability and everything else needed for complete accessibility. The integrated Verity Access audio-tactile interface (ATI) includes tactile buttons and provides compatibility with adaptive devices such as jelly switches and sip-and-puff devices.

VV-22 VERITY VOTING SYSTEM







#### **VERITY TOUCH WRITER WITH ACCESS**

The ATI interface is designed with easy-to-use tactile buttons and supports accessibility interfaces.

#### Verity Touch Writer Advantages

Verity Touch Writer's advantages over ballot marking devices provided by other vendors include:

- Touchscreen electronic interface and paper ballots. Verity Touch Writer provides a touchscreen electronic interface and paper ballots, enabling total accessibility, along with the audibility and confidence of paper ballots. Verity Touch Writer is part of a holistic system, with a common platform and user interface across all Verity components.
- Full paper ballot for use by all voters. With Verity Touch Writer, all voters use the same ballots, unlike other vendors' solutions, which require separate ballots for voters with special accessibility needs. Accessibility is built-in to Verity Touch Writer.
- **Easy to transport and set up.** Verity Touch Writer is easy to transport in ordinary vehicles and easy to set up at the polling place.

VERITY VOTING SYSTEM VV-23





- Print only ballots needed. Verity Touch Writer prints ballots from COTS ballot stock, one at a time for each voter, preventing waste while making sure there are always enough ballots. Verity Touch Writer requires no pre-loading of printed ballots, and no expensive, proprietary, special paper.
- Plain language user interface. Based on Design for Democracy guidelines, Verity's interface enhances usability for all voters, increasing voting efficiency and reducing voter wait time. In usability testing for purposes of federal certification, the average confidence level expressed by participants ("I felt very confident casting my vote using this ballot") was 4.61 on a 5-point scale, with 5 being most confident. The average satisfaction level ("I thought the voting process was easy") was 4.5. Other vendors use outdated interfaces that are not as seamlessly easy to use as Verity Touch Writer's and have received lower ratings.



• Voter-controlled audio, video, language, and adaptive voting options. Verity Touch Writer provides easy-to-use options that let voters customize the voting experience according to particular needs and abilities, resulting in faster voting and increased voter satisfaction. Onscreen options and the ability to choose to use the touchscreen or tactile controls, sip-and-puff, or jelly switches provide built-in accessibility to a diverse spectrum of voters. Verity excels in providing a wide array of voter-friendly options for accessible voting.



Part of a unified, universal system. Verity Touch
 Writer shares a common hardware platform and similar user interface with
 other Verity Voting system components, streamlining election processes





for elections staff and voters. For example, poll workers only need to be trained to set up one device. The consistent hardware platform and interface design reduces poll worker training time.

- Easy, independent ballot activation. Voters can activate
  their own correct ballot style by means of a simple access
  code. No pre-loading of ballots or proprietary cards is
  required. Voter independence is increased, and time
  required by poll workers is minimized.
- Comprehensive audit trail. Like all Verity devices, Verity
  Touch Writer provides a comprehensive audit trail of every
  action performed on the device. Not every vendor's solution
  includes this comprehensive, built-in auditing capability.
- Lower total cost of ownership. Verity Touch Writer's compact size saves storage space and reduces transportation costs. Setup at the polling place is easy for anyone reducing staffing costs and saving time. True to the Verity design, Verity Touch Writer requires very little maintenance.
- Versatile for long-term value. Verity Touch Writer accommodates almost limitless ballot styles and is part of the holistic, scalable Verity Voting solution that can adapt as your needs change.
- **Lifecycle longevity**. Verity Touch Writer promises many, many years of cost-effective service.







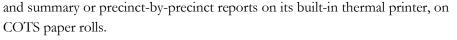
## **VERITY SCAN – DIGITAL SCANNING/TABULATION DEVICE**

**Verity Scan** is a digital scanning solution for paper ballots. At the polling place, after marking a paper ballot, the voter feeds it directly into Verity Scan.

Verity Scan's intuitive, plain-language touchscreen interface is based on EAC/AIGA Design for Democracy styles, for the very best voting experience.



The ballot image is stored as a cast vote record (CVR) on a Verity vDrive flash memory device that is later read by the Verity Count tabulation and reporting software. In addition, Verity Scan can quickly tabulate results and print ballot count totals



After scanning, paper ballots are automatically deposited directly into the secure Verity Ballot Box.





#### **VERITY SCAN AND VERITY BALLOT BOX**

The ballot box collapses to 6 inches thin for easy transport and efficient storage.

VV-26 VERITY VOTING SYSTEM





Verity Scan includes a compact and durable integrated storage case for secure, easy transport and storage. A corrugated plastic transport case is available for additional protection of Verity Scan's integrated carrying case.



#### **INDICATOR LIGHTS CLEARLY SHOW HOW TO INSERT THE BALLOT**

Patented indicator lights separate from the color touchscreen inform the user when the system is ready for a ballot to be inserted. Arrows blink green for **Ready to Accept Ballot** and red for **Do Not Insert Ballot**.

#### Verity Scan Advantages

Verity Scan's advantages over solutions provided by other vendors include:

- Digital scanning. Hart was the first voting system provider to use digital
  image capture, and Verity is Hart's second-generation system that uses this
  technology. Verity Scan captures images of the complete ballot and can
  accept multiple ballot styles and tabulate results on a precinct-specific
  basis. Other vendors use older technologies that are slower, cannot handle
  multiple ballot styles, and are not backed by Hart's depth of experience
  with digital scanning.
- Fast and efficient. Verity Scan scans both sides of a ballot in under six seconds and accepts ballots header first, footer first, face up, or face down.





Some systems must scan ballots in only one orientation, slowing the process.

- Digital capture and reporting of write-in votes. Verity Scan digitally sorts ballots that contain write-in votes. Verity Scan captures images of marked write-in choices. The integrated thermal printer can then print a graphic report of all write-in lines, enabling election officials to adjudicate write-ins at the polling place, if desired. (Alternatively, digitally imaged write-ins can be deferred for later adjudication in Verity Count.) This capability provides transparency, auditability, and efficient tabulation of returns. Other vendors are only now beginning to offer similar capabilities.
- Exceptionally easy to use. With its plain-language, Design
  for Democracy-based interface, and easy-scanning features,
  Verity Scan is a breeze for voters and poll workers to use.
  Other vendors use outdated interfaces that are more difficult
  to use. Verity's interface enhances usability for all voters,
  increasing voting efficiency and reducing voter wait time.
- Redundancy. Verity Scan includes multiple means of storing cast vote records for auditing, backup, and recovery. Some other vendors provide less comprehensive built-in redundancy, with backup components as options that you must purchase separately.
- Comprehensive audit trail. Like all Verity devices, Verity Scan provides a
  comprehensive audit trail of every action performed on the device. Not
  every vendor's solution includes this comprehensive, built-in auditing
  capability.
- Customizable second-chance voting. Plain-language
  notices alert voters about possible problems such as
  overvotes and invalid marks and give the voter the
  opportunity to correct their ballot. Elections officials
  can configure the system to display such second-chance
  options or not. Second-chance options increase voter
  satisfaction and help ensure accurate recording of voter
  intent and reduce the number of residual votes.



Your ballot may not be properly

Too many choices are marked.
This contest will not be counted.

To make changes, pull the ballot.

Cast ballot as-is





Easy, cost-effective transport and storage. Verity Scan's compact size
creates greater efficiencies and cost savings in transportation and storage
by reducing the need for trucking and warehouse space. Verity Voting
devices easily fit in typical private vehicles and are stackable for compact,
efficient storage.



**EASY TO TRANSPORT** 

The collapsible ballot box folds to just 6 inches thin.



#### STACKABLE FOR COMPACT STORAGE

The compact Verity Scan minimizes storage space requirements.

- **Flexible setup at the polling place.** Verity Scan's compact size enables poll workers to set up the device in the best place at each polling place for optimal voting workflow.
- Versatile for long-term value. Verity Scan easily manages hundreds of ballot styles, so you can use it in a wide variety of voting scenarios, even if your needs change.

VERITY VOTING SYSTEM VV-29





- Cost-saving features. With on-board testing and calibration, Verity Scan requires very little maintenance.
- Lifecycle longevity. Early in its lifecycle and with a robust new supply chain, Verity Scan promises many, many years of cost-effective service.



#### Verity Scan features and functions

- Captures and stores digital images of complete ballots as cast vote records.
- Can handle hundreds of ballot styles.
- Prints ballot count totals or tabulated results at the polling place, including summary or precinct-by-precinct reports, on a built-in thermal printer, using COTS paper rolls.
- Automatically deposits scanned ballots directly into the locked, secure
   Verity Ballot Box.
- Enables faster, more efficient voting because the scanner is not part of the ballot marking device but is a separate device (not an "all-in-one" device).
- Scans both sides of a ballot in under five seconds and accept ballots header first, footer first, face up, or face down.
- Can scan one-sided ballots, two-sided ballots, and multiple-page ballots while recording the event as one ballot cast.
- Provides safeguards to prevent acceptance of multiple ballots at the same time (double feeds).
- Digitally captures and reports write-in votes. Provides graphic cross-sections of marked write-in choices. Prints a graphic report of all write-in lines so polling place officials can adjudicate write-ins at the polling place, without having to sort through all ballots with write-ins. (Officials can defer adjudication of the digitally-captured write-ins until later, if they wish.)





- Complies with ADA standards, with controls in easy reach of users in wheelchairs.
- Provides customizable second-chance voting. Plain-language notices alert
  the voter about possible problems such as overvotes and invalid marks
  and gives the voter the opportunity to correct their ballot. Elections
  officials can configure Verity Scan to display such second-chance options
  or not.
- Supports multiple languages, with instructions in all languages that have been defined for the election, in both written and audio form.
- Automatically displays any voter-facing messages in the language of the ballot that is scanned on the device. The voter does not need to manually switch the language on the touchscreen interface, although a toggle button for this function is available.
- Includes multiple, built-in means of storing cast vote records for auditing, backup, and recovery. Backup/restore components are included in the price of the voting system – not as options that must be purchased separately.
- Includes a compact and durable integrated storage case for secure, easy transportation and storage.
- Enables election staff to perform routine maintenance, including testing and calibration, independently of the vendor, with no annual preventative maintenance or ongoing maintenance fees required.
- The compartment that contains the vDrive flash memory device that holds
  the election definition, cast vote records, and audit logs is secured by a
  keyed lock. The compartment does not need to be opened for any purpose
  other than to retrieve the memory device.
- Provides alerts if memory capacity is being reached.
- Provides a variety of font size settings for ease of readability.
- Includes the following security features:
- Protection from unauthorized access to data. All data is encrypted and digitally signed for tamper evidence. If anyone attempts to tamper with data, the system alerts elections staff.
- Protection from unauthorized access to electrical power and network connectivity.





- Enclosures that protect data during transportation.
- Secure transfer of voting data.
- Firmware security that protects against the loading or updating of firmware while the device is set for an election or is in election mode.
  - Includes a touchscreen interface with plain-language instructions based on EAC/AIGA Design for democracy guidelines.
  - Provides indicators separate from the color touchscreen that inform the user when the device is ready for a ballot to be inserted.
  - Compact for easy transport in typical private vehicles and for flexible deployment by poll workers. Stackable for economical storage.

VV-32 VERITY VOTING SYSTEM





# VERITY AUTOBALLOT KIT – BARCODE SCANNER FOR EXPEDITING VOTER CHECK-IN

The Verity AutoBallot barcode scanner integrates with electronic poll books to automate the process of generating the correct access code.

The AutoBallot software is integrated in Verity – nothing extra is needed other than the AutoBallot Kit.

#### Verity AutoBallot Advantages

- Speeds the voting workflow. Accelerates the process of moving voters through the check-in process, resulting in shorter lines.
- Automates ballot assignment. Because the AutoBallot scanner automates assigning the correct ballot to each voter, it is a tremendous efficiency booster in the precinct or vote center.
- Integrates electronic poll books with electronic or paper-based voting. By automatically selecting the proper ballot style based on information obtained during the check-in process, AutoBallot ensures accuracy of delivering the right ballot.
- Eliminates poll worker errors. Voters always receive the correct ballot style.
- Compatible with electronic poll books. AutoBallot works with any electronic poll book that can produce AutoBallot's simple barcode format.







This page intentionally blank.





## **COST ESTIMATE**

- 3. Based on the Cuyahoga County data attached to the email, provide a cost estimative for your paper based tabulation system.
- At least two (2) precinct ballot scanners per polling location
- One (1) ADA marking device per location
- High Speed Ballot Scanners
- Daily scan period typically six (6) hours per day over a seventeen (17) day period
- Equipment Reserves (Backup Equipment) for election day
- Training Equipment
- NOTE: Approximately 5000 workers attend an election training session during a county-wide election.

Yes, Hart complies with this requirement. Please see the **Cost Estimate** included with our response in which we have addressed the points of this requirement.

Verity Voting hardware and software represented in the tables is certified by the Ohio Secretary of State and U.S. Election Assistance Commission. All items proposed comprise complete voting system Options.

- Option 1: Pre-printed Ballots
  For Election Day and Absentee In-Person Voting
- Option 2: On-demand Printing of Ballots
   Polling Location on-demand printing of ballots and Central Count Absentee In-Person Voting

COST ESTIMATE CE-1





This page intentionally blank.

CE-2 COST ESTIMATE





#### **OPTION 1 – PRE-PRINTED BALLOTS**

Option 1 is configured with the following assumptions:

- Election day ballots will be pre-printed and delivered to polling locations
- Absentee In Person ballots will be printed on demand
- 2 Verity Scan digital ballot scanners per polling location
   Additional scanner added for the Parma Heights Baptist Church and
   Wylie Heights Athletic Center (692)
- 1 Verity Touch Writer ballot marking device per polling location for ADA voters (345)
- 4 Verity Scan digital scanners and 4 Verity Touch Writer ballot marking devices for Absentee In Person voting
- 22 Verity Print on-demand printers
   To be used during Absentee In Person voting
- 4 Verity Central high-speed digital scanners
   To scan absentee by-mail ballots
- Verity software
- All computer hardware and accessories
- Includes Delivery, Training, Project Management and Implementation Services
- Spare equipment: Verity Scan digital ballot scanners (69 units); Verity Touch Writer ballot marking devices (35 units)



COST ESTIMATE CE-3





This page intentionally blank.

CE-4 COST ESTIMATE





#### BID PRICE PAGE

Vendor: _	Hart InterCivic	
Solution E	Description (Optical Scan, DRE, Hybrid, etc.): <u>Verity Voting system</u>	
In the tab	le below, the bidder is to enter the itemized list for Cuyahoga County to purchase a voting machine solution based on the follo	owing criteria:
	Cuyahoga County:	
	2.45 Polling Locations	

345 Polling Locations 975 Precincts						
Option 1: Pre-printed Ballots						
Item	Hart Description	Quantity	Unit Cost	Extended Cost	State vs Non-State	
	an – Digital scanning/tab	ulation				
Precinct-Based Voting Equipment (i.e., Precinct-Count Optical						
Scanners, Marking Devices/Touchscreen Interfaces for Hybrid Units,						
Direct Recording Electronic Units [DREs])	Verity Scan		\$ 3,942.00		State-Funded	
Ballot Box or Bag for Precinct-Based Equipment	Verity Scan Ballot Box	765	\$ 445.00	\$ 340,425.00	Non-State-Funded	
Transport Bag or Case for Precinct-Based Equipment	Ballot Box Transport	765	\$ 60.00	\$ 45.900.00	Non-State-Funded	
Voter Privacy Screens	Bag	1530		\$ 22,950.00		
Voter Frivacy Screens	Verity Scan Calibration	1330	ý 15.00	ÿ 22,530.00	State-runded	
Additional Consumable	Kit	1	\$ 34.00	\$ 34.00	Non-State-Funded	
Licensing and Support for Software for Precinct-Based Equipment —	L&S (1-5) for Verity		7	7		
Years 1-5	Scan	765	\$ 699.00	\$ 534,735.00	State-Funded	
Licensing and Support for Software for Precinct-Based Equipment -	L&S (6-10) for Verity					
Extended - Years 6-10	Scan	765	\$ 1,052.00	\$ 804,780.00	Non-State-Funded	
Warranty on Any and All Hardware – Years 1-5 and billed with	Warranty (2-5) - Verity					
hardware	Scan	765		\$ 137,700.00	State-Funded	
Verity Touch Writer w	rith Access – Accessible b	allot marki	ng device			
	Verity Touch Writer w/					
Accessible Ballot Marking Device - ADA	Access		\$ 2,902.00		State-Funded	
Accessible Voting Booth - ADA – if necessary part of voting machine		384		\$ 120,960.00		
Transport Bags or Cases for Accessible Equipment - ADA		384 768	•	\$ 32,640.00		
Voter Privacy Screens		/08	\$ 15.00	\$ 11,520.00	State-Funded	
	Okidata B432dn Printer					
Printer - Accessible Ballot Marking Device - ADA	w/ Starter Cartridge	384	\$ 325.00	\$ 124,800.00	State-Funded	
Stand for Printer - Accessible Ballot Marking Device - ADA - if	w/ Starter Cartiluge	304	ÿ 323.00	ÿ 124,000.00	State-runded	
necessary part of voting machine		384	\$ 50.00	\$ 19.200.00	State-Funded	
Extender Plate		384		\$ -	State-Funded	
Licensing and Support for Software for Accessible Ballot Marking	L&S (1-5) for Verity					
Device – ADA – Years 1-5 and billed with hardware	Touch Writer	384	\$ 607.00	\$ 233,088.00	State-Funded	
Licensing and Support for Software for Accessible Ballot Marking	L&S (6-10) for Verity					
Device - ADA - Extended - Years 6-10	Touch Writer	384	\$ 914.00	\$ 350,976.00	Non-State-Funded	
Warranty on Any and All Hardware – Years 1-5 and billed with	Warranty (2-5) -					
hardware	Okidata B432dn Printer	384	\$ 275.00	\$ 105,600.00	State-Funded	
Warranty on Any and All Hardware – Years 1-5 and billed with	Warranty (2-5) - Verity	l				
hardware	Touch Writer	384	\$ 50.00	\$ 19,200.00	State-Funded	
Ballot Printer	y Print – On-demand prin		\$ 4,199.00	ć 02.378.00	State-Funded	
Ballot Pfiliter	Verity Print	22	\$ 4,199.00	\$ 92,378.00	State-runded	
	Okidata B432dn Printer					
Printer	w/ Starter Cartridge	22	\$ 325.00	\$ 7,150.00	State-Funded	
Extender Plate	w/ starter cartriage	22	\$ -	\$ -	State-Funded	
			7	Υ	State Fariaba	
AutoBallot Kit		22	\$ 419.00	\$ 9,218.00	Non-State-Funded	
Licensing and Support for Software for Ballot Printer – Years 1-5 and	L&S (1-5) for Verity					
billed with hardware	Print	22	\$ 874.00	\$ 19,228.00	State-Funded	
Licensing and Support for Software for Ballot Printer - Extended -	L&S (6-10) for Verity					
Years 6-10	Print	22	\$ 1,013.00	\$ 22,286.00	Non-State-Funded	
Warranty on Any and All Hardware – Years 1-5 and billed with	Warranty (2-5) -	1				
hardware	Okidata B432dn Printer	22	\$ 275.00	\$ 6,050.00	State-Funded	
Warranty on Any and All Hardware – Years 1-5 and billed with	Warranty (2-5) - Verity					
hardware	Print	22	\$ 50.00	\$ 1,100.00	State-Funded	

October 2018 Tabulation Equipment Survey, Cuyahoga County, Ohio CONFIDENTIAL

COST ESTIMATE CE-5





### BID PRICE PAGE (continued)

Option 1: Pre-printed Ballots (continued)						
ltem	Hart Description	Quantity	Unit Cost	Extended Cost	State vs Non-State	
	Verity Software					
Election Management and Ballot Definition Software	Verity Build - Tier 4	1	\$38,500.00	\$ 38,500.00	State-Funded	
Licensing and Support for Election Management and Ballot	L&S (1-5) for Verity					
Definition Software – Years 1-5 and billed with hardware	Build - Tier 4	1	\$40,881.00	\$ 40,881.00	State-Funded	
Licensing and Support for Election Management and Ballot Definition	L&S (6-10) Verity Build -					
Software - Extended - Years 6-10	Tier 4	1	\$61,548.00	\$ 61,548.00	Non-State-Funded	
Tabulation Software	Verity Count - Tier 4	1	\$ 11,550.00	\$ 11,550.00	State-Funded	
Licensing and Support for Tabulation Software – Years 1-5 and billed	L&S (1-5) for Verity					
with hardware	Count - Tier 4	1	\$ 12,265.00	\$ 12,265.00	State-Funded	
	L&S (6-10) Verity Count					
Licensing and Support for Tabulation Software - Extended - Years 6-10		1	\$ 18,465.00	\$ 18,465.00	Non-State-Funded	
	Verity Central Server -					
Software for High-Speed Scanner	Tier 4	1	\$46,200.00	\$ 46,200.00	State-Funded	
Licensing and Support for Software for High-Speed Scanner – Years 1-	L&S (1-5) for Verity					
5 and billed with hardware	Central Server - Tier 4	1	\$49,057.00	\$ 49,057.00	State-Funded	
Licensing and Support for Software for High-Speed Scanner -	L&S (6-10) Verity					
Extended - Years 6-10	Central Server - Tier 4	1	\$ 73,857.00	\$ 73,857.00	Non-State-Funded	
	Verity Central Client -		l .			
Software for High-Speed Scanner	Tier 4	3	\$11,550.00	\$ 34,650.00	State-Funded	
Licensing and Support for Software for High-Speed Scanner – Years 1-	L&S (1-5) for Verity		۱.			
5 and billed with hardware	Central Client - Tier 4	3	\$ 12,265.00	\$ 36,795.00	State-Funded	
Licensing and Support for Software for High-Speed Scanner -	L&S (6-10) Verity		١.	,		
Extended - Years 6-10	Central Client - Tier 4	3	\$ 18,465.00	ş 55,395.00	Non-State-Funded	
	lection Office Hardware	_				
Workstation & Monitor		5	\$ 4,000.00	· · ·	State-Funded	
Headphones with Microphone		1	\$ -	\$ -	State-Funded	
Ethernet Switch	OLIL L DAZZ L DILL	1	\$ 80.00	\$ 80.00	State-Funded	
Delate	Okidata B432dn Printer	l	A 335.00	4 63 5 00	Ct-t- Foundari	
Printer	w/ Starter Cartridge	5	\$ 325.00	\$ 1,625.00	State-Funded	
Marrantu on Anyand All Hardware - Vears 1 F and hilled with	Warrants (2 E)					
Warranty on Any and All Hardware – Years 1-5 and billed with	Warranty (2-5) - Okidata B432dn Printer	_ ا	\$ 275.00	ć 1.37F.00	Ctata Fundad	
hardware	Canon DR-G1130	5	\$ 275.00	\$ 1,375.00	State-Funded	
High Speed Scapper (for Control Count of Abcentee Pallets)	Central Scanner	۱ ,	\$ 7,700.00	\$ 30.800.00	State Funded	
High-Speed Scanner (for Central Count of Absentee Ballots)	Warranty (2-5) - Canon		\$ 7,700.00	\$ 50,600.00	State-Funded	
Warranty on Any and All Hardware – Years 1-5 and billed with	DR-G1130 Central					
hardware	Scanner	۱ ,	\$ 5,600.00	\$ 22,400,00	State-Funded	
naruware	Other	_ 4	\$ 3,000.00	3 22,400.00	State-runded	
Security Devices (e.g., keys, locks, etc.) for Precinct-Based	Outer	ı	1		1	
Voting Equipment)	Verity Key	118	\$ 80.00	\$ 9,440.00	State-Funded	
voting Equipments	verity itely	110	ÿ 00.00	3,440.00	State Fandeu	
Memory Device or Drives for Precinct-Based Voting Equipment						
memory period of prives for Freemer Basea vering Equipment						
	vDrive	2356	\$ 45.00	\$ 106,020,00	State-Funded	
Battery Charger, 6 Bay	v Dilive	22	\$ 540.00			
			1	22,530.00		
Implementation Services:						
System Setup Services (Includes voting system deployment,						
election office equipment setup, and LAT for 1st election on Verity		۔ ا	¢ 1 500 00	ć 7.500.00	Chata Funded	
system)		<del>                                     </del>	\$ 1,500.00	ς /,500.00	State-Funded	
Project Management Services (Includes project management,		1			1	
training, and election day support for 1st election on Verity						
system)		L 25	\$ 1,500.00	37,500.00	Non-State-Funded	
Delivery, Shipping of Equipment to Board of Elections' Office or						
Facility		9	\$ 3,135.00	\$ 28,215.00	State-Funded	
Subtotal – "State-Funded" Items (Table A of Bid Price Page)			\$ -	\$ 6,094,890.00		
Subtotal — "Non-State-Funded" Items (Table B of Bid Price Page)			\$ -	\$ 1,853,024.00		
				\$ 7,947,914.00		

October 2018 Tabulation Equipment Survey, Cuyahoga County, Ohio CONFIDENTIAL

CE-6 COST ESTIMATE





## **OPTION 2 – ON-DEMAND PRINTING OF BALLOTS**

Option 2 is configured with the following assumption:

- All ballots will be printed on-demand for Election Day and Absentee In Person voters
- 2 Verity Scan digital ballot scanners per polling location
   Additional scanner added for the Parma Heights Baptist Church and Wylie Heights Athletic Center (692)
- 1 Verity Touch Writer ballot marking device per polling location for ADA voters (345)
- 2 Verity Print on-demand printers per location For on-demand ballot printing.
  - 1 additional Verity Print added in polling locations with 4-8 Precincts
  - 2 additional Verity Print added to polling locations with 9-12 Precincts (732)
- 4 Verity Scan digital scanners and 4 Verity Touch Writer ballot marking devices for Absentee In Person voting
- 22 Verity Prints on-demand printers
   To be used during Absentee In Person voting.
- 4 Verity Central high-speed digital scanners
   To scan absentee by-mail ballots
- All Verity software
- All computer hardware and accessories
- Includes Delivery, Training, Project Management and Implementation Services



COST ESTIMATE CE-7





This page intentionally blank.

CE-8 COST ESTIMATE





#### BID PRICE PAGE (continued)

Vendor: _	Hart InterCivic	_
Solution D	escription (Optical Scan, DRE, Hybrid, etc.): <u>Verity Voting system</u>	
In the table	e below, the bidder is to enter the itemized list for Cuyahoga County to	purchase a voting machine solution based on the following criteria:
	Cuyahoga County:	
	345 Polling Locations	
	975 Precincts	

Hatt   Description   Quantity   Unit Cost   Extended Cost   State vs Non-Stat	Option 2: Printed on Demand						
Verity Scan   Digital scanning/tabulation   Verity Scan   Digital scanning/tabulation   Verity Scan   Scanners, Marking Devices/Touchscreen Interfaces for Hybrid Units, Direct Recording Electronic Units (DREs)   Verity Scan   765   \$ 3,942.00   \$ 3,015,630.00   State-Funded   State Funded	Item	Hart Description	Quantity	Unit Cost	Extended Cost	State vs Non-State	
Precinic Hased Voting Equipment (i.e., Precinic Count Optical Scamers, Marking Devices/Touchscreen Interfaces for Hybrid Units, Direct Recording Electronic Units (DREs)   Verity Scan Ballot Box							
Scanners, Marking Devices/Touchscreen Interfaces for Hybrid Units, Direct Recording Electronic Units (DREs)   Verity Scan   765 \$ 3,942.00 \$ 3,015,630.00 \$ State-Funded Ballot Rox Transport Bag for Precinct-Based Equipment   Verity Scan Ballot Box Transport Bag or Case for Precinct-Based Equipment   Bag   765 \$ 60.00 \$ 45,900.00 Non-State-Funded Voter Privacy Screens   1530 \$ 15.00 \$ 22,950.00 \$ State-Funded Verity Scan Calibration   State Screens   1530 \$ 15.00 \$ 22,950.00 \$ State-Funded Verity Scan Calibration   State Screens   1530 \$ 15.00 \$ 22,950.00 \$ State-Funded Verity Scan Calibration   State Screens   1530 \$ 15.00 \$ 22,950.00 \$ State-Funded Verity Scan Calibration   State Screens   State Screens   1530 \$ 15.00 \$ 22,950.00 \$ State-Funded   State Screens   State Screen   State Scr		0.					
Direct Recording Electronic Units (DRES)   Verify Scan   765   3,942.00   \$ 3,015,630.00   \$ 340,425.00   \$ 3,015,630.00   \$ 340,425.00   \$ 3,015,630.00   \$ 340,425.00   \$ 3,015,630.00   \$ 340,425.00   \$ 3,015,630.00   \$ 340,425.00   \$ 340,40   \$ 340,	= 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
Ballot Box or Bag for Precinct-Based Equipment   Verity Scan Ballot Box   765   \$ 445.00   \$ 340,425.00   Non-State-Funded   Ballot Box Transport Bag or Case for Precinct-Based Equipment   Bag   765   \$ 60.00   \$ 45,900.00   Non-State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 22,950.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 22,950.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 22,950.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 22,950.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 22,950.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 22,950.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 34.00   Non-State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 34.00   Non-State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 34.00   Non-State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 137,700.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 137,700.00   State-Funded   Voter Privacy Screens   1530   \$ 15.00   \$ 137,700.00   State-Funded   Voter Privacy Screens   1530   \$ 15.0		erity Scan	765	\$ 3.942.00	\$ 3.015.630.00	State-Funded	
Ballot Box Transport   Ballot Box Transport Ballot Box Transport   Ballot Box Transport Box Transport Ballot Box Transport Box Tra							
Transport Bag or Case for Precinct-Based Equipment   Bag   765   \$ 6.0.0   \$ 45,900.00   Non-State-Funded				,	,		
Verity Scan Calibration		•	765	\$ 60.00	\$ 45,900.00	Non-State-Funded	
Verity Scan Calibration   Nat		U					
Additional Consumable   Kit   1   \$ 34.00   \$ 34.00   Non-State-Funded		erity Scan Calibration		,	,		
Licensing and Support for Software for Precinct-Based Equipment			1	\$ 34.00	\$ 34.00	Non-State-Funded	
Verity   Scan   765   \$ 699.00   \$ 534,735.00   State-Funded		&S (1-5) for Verity		,	,		
Likensing and Support for Software for Precinct-Based Equipment - Extended - Years 6-10   Scan   765   \$ 1,052.00   \$ 804,780.00   Non-State-Funded Warranty on Any and All Hardware — Years 1-5 and billed with hardware   Yerity Touch Writer with Access — Accessible ballot marking device   Verity Touch Writer with Access — Accessible ballot marking device   Verity Touch Writer w/ Access   384   \$ 2,902.00   \$ 1,114,368.00   State-Funded   State-Funded   Verity Touch Writer w/ Access   Accessible Voting Booth - ADA — if necessary part of voting machine   384   \$ 315.00   \$ 120,960.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 19,200.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 19,200.00   State-Funded   Voter Privacy Screens   75,000   Voter			765	\$ 699.00	\$ 534,735.00	State-Funded	
Extended - Years 6-10   Scan   765   \$ 1,052.00   \$ 804,780.00   Non-State-Funded   Warranty on Any and All Hardware - Years 1-5 and billed with   Marranty (2-5) - Verity   Touch Writer with   Access   Accessible ballot marking   Device - ADA   Access   Accessible Ballot Marking Device - ADA   Access   Accessible Verity Touch Writer with   Access   Accessible Ballot Marking Device - ADA   Access   Accessible Verity Touch Writer with   Access   Accessible Verity Verity Touch Writer   Accessible Verity Verity Verity   Access   Accessible Verity Verity Verity Verity   Access   Accessible Verity Verity Verity Verity Verity Verity   Access   Accessible Verity Verity Verity Verity Verity Verity   Access   Accessible Verity Verit				,	7,		
Warranty on Any and All Hardware — Years 1-5 and billed with hardware   Verity Touch Writer with Access — Accessible ballot marking device   Verity Touch Writer with Access — Accessible ballot marking device   Verity Touch Writer with Access — Accessible ballot marking device   Verity Touch Writer with Access   384   \$ 2,902.00   \$ 1,114,368.00   State-Funded   Accessible Voting Booth — ADA — if necessary part of voting machine   Transport Bags or Cases for Accessible Equipment — ADA   Access   Asada   \$ 85.00   \$ 32,640.00   Non-State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 11,520.00   State-Funded   Voter Privacy Screens   768   \$ 15.00   \$ 124,800.00   State-Funded   Voter Privacy Screens   Verity Frinter — Accessible Ballot Marking Device — ADA — if necessary part of voting machine   Asada   \$ 50.00   \$ 19,200.00   State-Funded   Stand for Printer — Accessible Ballot Marking Device — ADA — if necessary part of voting machine   Asada   \$ 50.00   \$ 19,200.00   State-Funded   Stand for Printer — Accessible Ballot Marking Device — ADA — Years 1-5 and billed with hardware   L&S (1-5) for Verity   Device — ADA — Years 1-5 and billed with hardware   L&S (51-5) for Verity   Device — ADA — Years 1-5 and billed with   Warranty (2-5) — Okidata B432dn Printer   384   \$ 914.00   \$ 350,976.00   Non-State-Funded   Warranty on Any and All Hardware — Years 1-5 and billed with   Warranty (2-5) — Warranty on Any and All Hardware — Years 1-5 and billed with   Warranty (2-5) — Verity   Touch Writer   384   \$ 50.00   \$ 19,200.00   State-Funded   Warranty on Any and All Hardware — Years 1-5 and billed with   Warranty (2-5) — Verity   Touch Writer   384   \$ 50.00   \$ 3,073,668.00   State-Funded   Warranty on Any and All Hardware — Years 1-5 and billed with   Warranty (2-5) — Verity   Touch Writer   384   \$ 50.00   \$ 3,073,668.00   State-Funded   Werty Print — Ohemand printing   Verity	= :: : : : : : : : : : : : : : : : : :		765	\$ 1.052.00	\$ 804,780.00	Non-State-Funded	
National				Ţ 1,001.00	φ σσ 1,1 σσ 1σσ	Tron state range	
Verity Touch Writer with Access — Accessible ballot marking device	· · ·		765	\$ 180.00	\$ 137,700,00	State-Funded	
Verity Touch Writer w/ Access   384   \$ 2,902.00   \$ 1,114,368.00   State-Funded				1	φ 137,733.03	State Fandea	
Accessible Ballot Marking Device - ADA			anot mana	II G GE VICE		1	
Accessible Voting Booth - ADA - if necessary part of voting machine   384 \$ 315.00 \$ 120,960.00   State-Funded			384	\$ 2 902 00	\$ 1.114.368.00	State-Funded	
Transport Bags or Cases for Accessible Equipment - ADA   384 \$ 85.00 \$ 32,640.00   Non-State-Funded		100000		,			
Voter Privacy Screens  Okidata B432dn Printer Printer - Accessible Ballot Marking Device - ADA W/ Starter Cartridge 384 \$ 325.00 \$ 124,800.00 State-Funded  Stand for Printer - Accessible Ballot Marking Device - ADA - if necessary part of voting machine Extender Plate Licensing and Support for Software for Accessible Ballot Marking Device - ADA - Years 1-5 and billed with hardware Licensing and Support for Software for Accessible Ballot Marking Device - ADA - Extended - Years 6-10  Warranty on Any and All Hardware - Years 1-5 and billed with Hardware  Warranty on Any and All Hardware - Years 1-5 and billed with Hardware  Warranty on Any and All Hardware - Years 1-5 and billed with Warranty (2-5) - Okidata B432dn Printer Warranty on Any and All Hardware - Years 1-5 and billed with Warranty (2-5) - Verity Touch Writer 384 \$ 50.00 \$ 105,600.00 State-Funded Warranty on Any and All Hardware - Years 1-5 and billed with Warranty (2-5) - Verity Touch Writer 384 \$ 50.00 \$ 105,600.00 State-Funded Warranty on Any and All Hardware - Years 1-5 and billed with Warranty (2-5) - Verity Touch Writer 384 \$ 50.00 \$ 105,600.00 State-Funded Warranty on Any and All Hardware - Years 1-5 and billed with Warranty (2-5) - Verity Touch Writer 384 \$ 50.00 \$ 105,600.00 State-Funded Warranty on Any and All Hardware - Years 1-5 and billed with Warranty (2-5) - Verity Touch Writer 384 \$ 50.00 \$ 105,600.00 State-Funded Warranty Onderson State-Funded Warranty (2-5) - Verity Touch Writer 384 \$ 50.00 \$ 30,073,668.00 State-Funded Warranty Onderson State-Funded W				,			
Okidata B432dn Printer  Printer - Accessible Ballot Marking Device - ADA  Stand for Printer - Accessible Ballot Marking Device - ADA - if necessary part of voting machine  Extender Plate  Licensing and Support for Software for Accessible Ballot Marking Device - ADA - Years 1-5 and billed with hardware  Licensing and Support for Software for Accessible Ballot Marking Device - ADA - Extended - Years 6-10  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Werity Print  Warranty (2-5) - Verity Touch Writer  384 \$ 275.00 \$ 105,600.00 State-Funded  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Verity Print  732 \$ 4,199.00 \$ 3,073,668.00 State-Funded  Okidata B432dn Printer  Wy Starter Cartridge  732 \$ 325.00 \$ 237,900.00 State-Funded				,			
Printer - Accessible Ballot Marking Device - ADA	voter rrivacy sercens		700	ý 15.00	ÿ 11,520.00	State-runded	
Printer - Accessible Ballot Marking Device - ADA	0	Neidata RA32dn Printer					
Stand for Printer - Accessible Ballot Marking Device - ADA - if necessary part of voting machine  Extender Plate  Licensing and Support for Software for Accessible Ballot Marking Device - ADA - Years 1-5 and billed with hardware  Licensing and Support for Software for Accessible Ballot Marking Device - ADA - Years 1-5 and billed with Arking Device - ADA - Extended - Years 6-10  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Warranty on Any and All Hardware - Years 1-5 and billed with hardware  Werity Print - On-demand printing  Werity Print - On-demand printing  Printer  Printer  Printer  Printer  State-Funded  State-Funded  State-Funded  State-Funded  Okidata B432dn Printer  We Starter Cartridge  732 \$ 325.00 \$ 237,900.00 State-Funded			39/	\$ 325.00	\$ 124,800,00	State Funded	
Necessary part of voting machine   384   \$ 50.00   \$ 19,200.00   \$ state-Funded	· ·	y starter cartridge	304	\$ 323.00	3 124,800.00	State-runded	
Extender Plate	,		201	\$ 50.00	¢ 10.200.00	State Eunded	
Licensing and Support for Software for Accessible Ballot Marking Device – ADA – Years 1-5 and billed with hardware Licensing and Support for Software for Accessible Ballot Marking Device - ADA – Extended - Years 6-10  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Warranty on Any and All Hardware — Years 1-5 and billed with Hardware  Werity Print — On-demand printing  Werity Print  Werity Print  Okidata B432dn Printer Werity Print  Okidata B432dn Printer Werity Print  Okidata B432dn Printer Werity Print  732 \$ 4,199.00 \$ 237,900.00 State-Funded				,	,		
Device – ADA – Years 1-5 and billed with hardware  Licensing and Support for Software for Accessible Ballot Marking Device - ADA – Extended - Years 6-10  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty (2-5) – Okidata B432dn Printer  Warranty (2-5) – Verity Touch Writer  384 \$ 275.00 \$ 105,600.00 State-Funded  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Verity Print – On-demand printing  Ballot Printer  Verity Print  732 \$ 4,199.00 \$ 3,073,668.00 State-Funded  Okidata B432dn Printer  Printer  W/ Starter Cartridge  732 \$ 325.00 \$ 237,900.00 State-Funded		9.C (1 E) for Varity	364	э -	э -	State-runded	
Licensing and Support for Software for Accessible Ballot Marking Device - ADA - Extended - Years 6-10  Warranty on Any and All Hardware — Years 1-5 and billed with hardware  Warranty on Any and All Hardware — Years 1-5 and billed with hardware  Warranty on Any and All Hardware — Years 1-5 and billed with hardware  Warranty (2-5) — Okidata B432dn Printer 384 \$ 275.00 \$ 105,600.00 State-Funded  Warranty (2-5) — Verity Touch Writer 384 \$ 50.00 \$ 19,200.00 State-Funded  Verity Print — On-demand printing  Ballot Printer  Verity Print 732 \$ 4,199.00 \$ 3,073,668.00 State-Funded  Okidata B432dn Printer  Printer  W/ Starter Cartridge 732 \$ 325.00 \$ 237,900.00 State-Funded	9 !!	· · ·	201	¢ 607.00	ć 222.000.00	State Funded	
Device - ADA - Extended - Years 6-10			304	\$ 607.00	\$ 255,066.00	State-runded	
Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty on Any and All Hardware – Years 1-5 and billed with hardware  Warranty (2-5) – Verity Touch Writer  Touch Writer  Werity Print – On-demand printing  Ballot Printer  Verity Print  732 \$ 4,199.00 \$ 3,073,668.00 State-Funded  Okidata B432dn Printer  W/ Starter Cartridge  732 \$ 325.00 \$ 237,900.00 State-Funded	9 ,,		204	ć 01400	ć 350.07C.00	Non Ctata Fundad	
Narranty on Any and All Hardware — Years 1-5 and billed with hardware   Okidata 8432dn Printer   384   \$ 275.00   \$ 105,600.00   State-Funded	Device - ADA - Extended - Years 6-10	ouch writer	384	\$ 914.00	\$ 350,976.00	Non-State-Funded	
Narranty on Any and All Hardware — Years 1-5 and billed with hardware   Okidata 8432dn Printer   384   \$ 275.00   \$ 105,600.00   State-Funded	Mariana Anno and All Handrian - Maria di Franchi III di Antible	V=					
Warranty on Any and All Hardware – Years 1-5 and billed with hardware         Warranty (2-5) – Verity Touch Writer         384         \$ 50.00         \$ 19,200.00         State-Funded           Verity Print – On-demand printing           Ballot Printer         Verity Print         732         \$ 4,199.00         \$ 3,073,668.00         State-Funded           Okidata B432dn Printer         Okidata B432dn Printer         732         \$ 325.00         \$ 237,900.00         State-Funded			204	ć 375.00	ć 40F 600 00	Ct-t- Franksi	
hardware         Touch Writer         384         \$ 50.00         \$ 19,200.00         State-Funded           Verity Print – On-demand printing           Ballot Printer         Verity Print         732         \$ 4,199.00         \$ 3,073,668.00         State-Funded           Okidata B432dn Printer         Okidata B432dn Printer         732         \$ 325.00         \$ 237,900.00         State-Funded			384	\$ 275.00	\$ 105,600.00	State-Funded	
Verity Print – On-demand printing           Ballot Printer         Verity Print         732         \$ 4,199.00         \$ 3,073,668.00         State-Funded           Okidata B432dn Printer         Okidata B432dn Printer         732         \$ 325.00         \$ 237,900.00         State-Funded					40.000.00		
Ballot Printer         Verity Print         732         \$ 4,199.00         \$ 3,073,668.00         State-Funded           Okidata B432dn Printer         Okidata B432dn Printer         732         \$ 325.00         \$ 237,900.00         State-Funded				\$ 50.00	\$ 19,200.00	State-Funded	
Okidata B432dn Printer Printer w/ Starter Cartridge 732 \$ 325.00 \$ 237,900.00 State-Funded				Á 1100.00	A 2.072.550.00	lo	
Printer w/ Starter Cartridge 732 \$ 325.00 \$ 237,900.00 State-Funded	Ballot Printer Ve	erity Print	/32	\$ 4,199.00	\$ 3,073,668.00	State-Funded	
Printer w/ Starter Cartridge 732 \$ 325.00 \$ 237,900.00 State-Funded		N. I. I. D. 122 I. D. I. I.					
			72.0		4 22700000		
Extender Plate /32 \$ - \$ - State-Funded		// Starter Cartridge					
	Extender Plate		/32	Ş -	Ş -	State-Funded	
1						L	
AutoBallot Kit 732 \$ 419.00 \$ 306,708.00 Non-State-Funded		0.0 (4.5) 5	732	\$ 419.00	\$ 306,708.00	Non-State-Funded	
Licensing and Support for Software for Ballot Printer — Years 1-5 and L&S (1-5) for Verity	9 !!					[	
billed with hardware         Print         732         \$ 874.00         \$ 639,768.00         State-Funded			732	\$ 874.00	ş 639,768.00	State-Funded	
Licensing and Support for Software for Ballot Printer - Extended - L&S (6-10) for Verity	•			<b> </b>			
Years 6-10         Print         732         \$ 1,013.00         \$ 741,516.00         Non-State-Funded	Years 6-10 Pr	rint	732	\$ 1,013.00	\$ 741,516.00	Non-State-Funded	
Warranty on Any and All Hardware – Years 1-5 and billed with Warranty (2-5) -	Warranty on Any and All Hardware - Vears 1.5 and hilled with	V=====+/>_ F\	1	I			
hardware         Okidata B432dn Printer         732         \$ 275.00         \$ 201,300.00         State-Funded							
Warranty on Any and All Hardware – Years 1-5 and billed with Warranty (2-5) - Verity	hardware O	okidata B432dn Printer	732	\$ 275.00	\$ 201,300.00	State-Funded	
hardware	hardware O Warranty on Any and All Hardware – Years 1-5 and billed with W	Okidata B432dn Printer Varranty (2-5) - Verity					

October 2018 Tabulation Equipment Survey, Cuyahoga County, Ohio CONFIDENTIAL

COST ESTIMATE CE-9





#### BID PRICE PAGE (continued)

Option 2: Printed on Demand (continued)					
Item	Hart Description	Quantity	Unit Cost	Extended Cost	State vs Non-State
item	Verity Software	Quantity	O'lit Cost	Extended cost	State vs Hon State
Election Management and Ballot Definition Software	Verity Build - Tier 4	1	\$38,500.00	\$ 38,500.00	State-Funded
Licensing and Support for Election Management and Ballot	L&S (1-5) for Verity			, ,	
Definition Software – Years 1-5 and billed with hardware	Build - Tier 4	1	\$40,881.00	\$ 40,881.00	State-Funded
Licensing and Support for Election Management and Ballot Definition	L&S (6-10) Verity Build -				
Software - Extended - Years 6-10	Tier 4	1	\$ 61,548.00	\$ 61,548.00	Non-State-Funded
Tabulation Software	Verity Count - Tier 4	1	\$ 11,550.00	\$ 11,550.00	State-Funded
Licensing and Support for Tabulation Software – Years 1-5 and billed	L&S (1-5) for Verity				
with hardware	Count - Tier 4	1	\$ 12,265.00	\$ 12,265.00	State-Funded
	L&S (6-10) Verity Count				
Licensing and Support for Tabulation Software - Extended - Years 6-10	- Tier 4	1	\$ 18,465.00	\$ 18,465.00	Non-State-Funded
	Verity Central Server -				
Software for High-Speed Scanner	Tier 4	1	\$46,200.00	\$ 46,200.00	State-Funded
Licensing and Support for Software for High-Speed Scanner – Years 1-	L&S (1-5) for Verity				
5 and billed with hardware	Central Server - Tier 4	1	\$49,057.00	\$ 49,057.00	State-Funded
Licensing and Support for Software for High-Speed Scanner -	L&S (6-10) Verity			l.	
Extended - Years 6-10	Central Server - Tier 4	1	\$ 73,857.00	\$ 73,857.00	Non-State-Funded
L	Verity Central Client -			l	L
Software for High-Speed Scanner	Tier 4	3	\$ 11,550.00	\$ 34,650.00	State-Funded
Licensing and Support for Software for High-Speed Scanner – Years 1-	L&S (1-5) for Verity				
5 and billed with hardware	Central Client - Tier 4	3	\$ 12,265.00	\$ 36,795.00	State-Funded
Licensing and Support for Software for High-Speed Scanner -	L&S (6-10) Verity				
Extended - Years 6-10	Central Client - Tier 4	3	\$ 18,465.00	\$ 55,395.00	Non-State-Funded
	ection Office Hardware	-	ć 4.000.00	ć 20.000.00	Chata Francisco
Workstation & Monitor			\$ 4,000.00	\$ 20,000.00	
Headphones with Microphone Ethernet Switch		1	\$ - \$ 80.00	\$ - \$ 80.00	State-Funded State-Funded
Ethernet Switch	Okidata B432dn Printer		\$ 80.00	\$ 80.00	State-Funded
Printer	w/ Starter Cartridge	5	\$ 325.00	\$ 1.625.00	State-Funded
Time	w/ Starter cartriage		, 323.00	٦,023.00	State-runded
Warranty on Any and All Hardware – Years 1-5 and billed with	Warranty (2-5) -				
hardware	Okidata B432dn Printer	5	\$ 275.00	\$ 1,375.00	State-Funded
inatura c	Canon DR-G1130		ŷ 275.00	γ 1,57 51 <b>3</b> 0	State Fandou
High-Speed Scanner (for Central Count of Absentee Ballots)	Central Scanner	4	\$ 7,700.00	\$ 30,800.00	State-Funded
	Warranty (2-5) - Canon		7 171222	7	
Warranty on Any and All Hardware – Years 1-5 and billed with	DR-G1130 Central				
hardware	Scanner	4	\$ 5,600.00	\$ 22,400.00	State-Funded
	Other			,	•
Security Devices (e.g., keys, locks, etc.) for Precinct-Based					
Voting Equipment	Verity Key	205	\$ 80.00	\$ 16,400.00	State-Funded
Memory Device or Drives for Precinct-Based Voting Equipment					
	vDrive	4110	\$ 45.00	\$ 184,950.00	State-Funded
Battery Char <i>g</i> er, 6 Bay		38	\$ 540.00	\$ 20,520.00	State-Funded
Implementation Services:					
System Setup Services (Includes voting system deployment,					
election office equipment setup, and LAT for 1st election on Verity					
system)		5	\$ 1,500.00	\$ 7,500.00	State-Funded
Project Management Services (Includes project management,				•	
training, and election day support for 1st election on Verity					
system)		25	\$ 1,500.00	\$ 37,500.00	Non-State-Funded
Delivery, Shipping of Equipment to Board of Elections' Office or					1
Facility		12	\$ 3,135.00	\$ 40,755.00	State-Funded
1 actives		13	y 3,133.00	÷ 40,733.00	State-Fullueu
Subtotal – "State-Funded" Items (Table A of Bid Price Page)			\$ -	\$ 10,265,290.00	
Subtotal – "Non-State-Funded" Items (Table B of Bid Price Page)			\$ -	\$ 2,869,744.00	
Total Cost for Cuyahoga County - Option 2 (Printed on Demand)	<u>I</u>		Υ -	\$ 13,135,034.00	
Total cost for cuyanoga country option 2 (Trinted on Demand)				2 15,155,054.00	

October 2018 Tabulation Equipment Survey, Cuyahoga County, Ohio CONFIDENTIAL

CE-10 COST ESTIMATE





## **ADDITIONAL INFORMATION**

This section includes the following information:

- Security
- Sample Verity Master Agreement

Hart respectfully requests that the information in this section remain Confidential.





## **SECURITY**

The Verity Voting system embodies best practices for security, accuracy, and reliability – for every component and for all data – at every step of the election workflow.

Unlike older, first-generation voting technology, Verity is designed with the latest security protocols at its core. Throughout the design, development, and testing process for this all-new system, Hart has been able to leverage the newest, most up-to-date technologies and best practices for security.

Verity's best practices for security include:

- All applications are whitelisted.
- Secure BIOS ("verified boot software").
- Only verified components can be installed.
- Only verified components can be executed.
- Intrusion detection physical and application security.
- Flexible, strong role management.
- Data is signed to verify source.
- Two-factor authentication.
- NIST-validated encryption.
- Redundancy, randomization of cast vote records.

#### INTRUSION DETECTION - PHYSICAL AND APPLICATION SECURITY

Verity employs a "defense-in-depth" strategy, whereby security architecture and code is reused by all applications, whether on the desktop or on voting devices. In this manner, Verity security covers physical, electronic, software and policies for Verity customers, across the system.

Throughout the system, the code implements controls for:

- Authorization
- Authentication
- Auditing
- Non-repudiation





- Validation
- Tamper resistance and evidence

Verity implements a AAA security model separate from the host operating system and the jurisdiction's infrastructure. This includes role-based access control (RBAC). Verity Build, Verity Central, and Verity Count are physically separated from the intranet and extranet in order to reduce network-based risks.

All Verity data, including logs, cast vote records, and election definitions, are digitally signed using NIST-validated FIPS 140-2 methods to ensure non-repudiation. These methods include:

- Implementing a local network that is not connected to other office or public networks.
- Role-based access control (RBAC) user accounts.
- Two-factor authorization for critical actions.

The integrity of critical operating system files is protected by:

- The Secure Boot security standard prevents the system from starting if the master boot record, operating system, or firmware has changed.
- The operating system, Windows Embedded 7, is custom-built to include only components required to support our software and hardware.
- Enhanced Write Filter prevents the operating system and the firmware from being permanently altered.
- A system validation tool feature enables users to verify the hashes on critical files of the operating system.
- A secure BIOS on polling place devices ensures the system will only boot into the authentic Verity environment.
- All Verity Voting software applications are installed on PC workstations in a "kiosk mode" setup that does not allow users direct access to the operating system.

The following methods restrict access to data and programs on the voting system so that they are only accessible to authorized personnel:

- Authentication is internal to Verity.
  - User accounts and passwords are managed by Verity.
  - Account management is not part of an application.





- Authorization is role-based:
  - Each user has a role.
  - Each independent operation is authorized by the system based on role (RBAC).
  - NIST-approved security pattern.
- Verity Key, a secure electronic token, serves two functions:
  - The physical token, which is similar in appearance to a USB device, provides secure transport of secrets such as keys for digital scanners.
  - Two-factor authentication at critical points in the election workflow. Verity Key represents "something you have" (the physical security device) and it requires "something you know" (a passcode). Each Key is associated with a single election.
- All user and system actions are logged and auditable.

### **SECURE DEVICE CONFIGURATION**

To securely access the Verity Touch Writer and Verity Scan touchscreen interfaces to configure the device for an election, the user must have access to the passwords that have been designated for the election and to the appropriate Verity Key.

The Verity Key is a two-factor authentication device used to secure access to critical functions throughout the election. Two-factor authentication means that users must have the physical Key device (similar to a USB token) and must know the passcode associated with the physical security device. This electronic device is required for access to secure functions.

Once the device is configured for the election, the poll workers must know the password configured for the election in order to perform administrative functions such as opening and closing the polls.







#### SECURE VOTING DEVICES

Verity security is robustly designed to protect the integrity of the voting equipment and ballots at every step. Hart's security-in-depth protocol has been proven in multiple certifications and deployments and meets the requirements of the EAC. Hart follows a strict trusted build process per VVSG guidelines. We also maintain locked-down system controls consisting of secure boot and whitelisted objects within the filesystem. Both these security measures ensure that a constructed device cannot be mutated following a trusted build – Verity is a locked-down system that ensures the voting device cannot be compromised.

Verity Voting devices have a variety of physical access controls and safeguards to ensure that sensitive equipment is accessed only by authorized personnel – not by voters. These access controls include keyed locks, features to support the use of tamper-evident seals, port protection, and non-standard electrical wiring in strategic areas.

- Each Verity Voting device includes a compact and durable integrated storage case for secure, easy transport and storage.
- Two keyed locks restrict a user's ability to open the integrated case that encloses each voting device ("the suitcase").
- The exterior handle to each case was purposely designed with two mated parts that are protected by zip-tie, tamper-evident seals to prevent unauthorized users from opening the case.



- Inside each voting device case, the compartment that contains the sensitive flash memory device (vDrive) that contains the election definition, cast vote records, and audit logs is secured by a keyed lock.
- The removable, dockable tablet display inside each voting device includes a keyed locking mechanism to manage the storage, removal, and configuration of the tablet. In addition, the dockable display is further protected with an electromechanical control that notifies the system software of any unauthorized disconnection.
- Some ports on Verity voting devices (USB ports for peripheral printers, etc.) are non-standard in physical shape (that is, they are "keyed") and accommodate only Hart-proprietary cables and devices in order to prevent attempts to insert unauthorized, standard, commercial-off-the-shelf cables or devices into Verity voting machines.





- On/off power switches are located on a rear panel with a recessed indent that allows only authorized users to quickly and easily identify power controls. In our legacy systems and with Verity, Hart has always chosen to use physical access controls and design features other than keyed locks to prevent unwanted shutoff of devices. We have done this primarily to reduce the risk that needed voting devices could be rendered unavailable for use if a required key for power controls is misplaced. This design strategy has been successful, as proven in over a decade of elections and millions of votes cast using Hart voting technology.
- In addition to physical access controls that prevent foreign devices from being
  inserted into Verity device ports, the internal components of the devices are
  also electronically wired in non-standard ways; foreign devices will be
  recognized, and related ports will be disabled in response to unauthorized
  insertions.
- User input is limited to the touchscreen interface.
- All network communication is authenticated and encrypted using Transport Layer Security (TLS).
- Application whitelisting prevents unauthorized executable code from being executed on the device.

## SECURE VOTE SCANNING, RECORDING, AND TABULATION

Verity Scan scans two-sided ballots and multiple-page ballots while recording the event as one ballot cast. To preserve the security and multi-sheet feeding protection capabilities of the system, ballots that have content on only one side include security barcodes on the blank side of the sheet. In addition to the public counter that indicates the number of ballots cast for the election on the Verity Scan device, Verity Scan provides a sheet counter that indicates the number of sheets that have been scanned on the device for that election.



Verity Central ensures that only those ballot styles specific to the current election are recorded and tabulated.

Verity Central rejects ballots that are not printed for the election that is currently defined and open on the system. The election identifier is embedded into the security barcodes on the ballots. Verity Central checks this election identifier on each ballot that is scanned and rejects any ballots that do not contain the correct election identifier.





#### **SECURE ACCESS**

Multiple security mechanisms prevent the modification of software or internal configurations at all times, and all Verity Voting software applications are installed in a secure "kiosk" mode that disallows user access to the operating system of the workstation on which the application is installed.



Verity user roles adhere to the principle of least privilege.

Verity requires that all users have unique login credentials including but not limited to a unique username and unique password. Verity password complexity and login rules are configurable by the election official administering the system.

#### **SECURE DATA**

Verity's stringent security features protect election data at every step of the election process. Verity has undergone a thorough source code review and rigorous security testing to achieve certification from the U.S. Election Assistance Commission. Not all voting systems in the marketplace have undergone this highest, most rigorous level of testing to federal standards.

#### Secure ballot layout and election configuration data

Ballot layout and election configuration data is secure from unauthorized modification or copying of such data. Verity implements a AAA security model separate from the host operating system and the County's infrastructure. This includes role-based access control (RBAC). Verity Build, Central, and Count are





physically separated from the intranet and extranet in order to reduce network-based risks.

All the data, including logs, cast vote records, and election definitions, are digitally signed using NIST-validated FIPS 140-2 methods to ensure non-repudiation. These methods include:

- Implementing a local network that is not connected to other office or public networks
- RBAC user accounts and a 2-factor authorization for key actions
- Kiosk setup that does not allow users direct access to the operating system.

The integrity of critical operating system files is protected by:

- Implementation of the Enhanced Write Filter features of Windows 7 embedded to prevent changes
- A system validation tool features that allows users to verify the hashes on critical files of the operating system
- A secure BIOS on polling place devices that ensures the system will only boot into the authentic Verity software environment.

#### **SECURE DATA TRANSMISSION**



Cast vote records are digitally signed to allow for validation of the data and are written to the vDrive in Verity Scan and Verity Central. Once the CVRs are written to the vDrive, they cannot be written again. After a vDrive is written in Verity Scan or Verity Central, it is taken to the Verity Count station for tabulation and additional reporting.

If the vDrive to which the CVRs were written is lost, Verity Scan or Verity Central can create a Recovery vDrive that can be read into the Verity Count application.

#### SECURE DESTRUCTION OF DATA

Hart utilizes several professional data destruction firms when disposing of electronic-based media or paper-based media in which data security is a concern.





## TRAINING FOR SECURITY

Hart's training courses for system operators and election officials includes security topics. Physical, device configuration, and data transfer security topics are covered in the following courses:

- Support Procedures
- Polling Place Operations
- Management and Best Practices.
- Train-the-Trainer course for training trainers who will, in turn, train poll workers.
- Verity Central course for high-speed scanner operators and adjudication/resolution board members.





## **SAMPLE VERITY MASTER AGREEMENT**

A sample Verity Master Agreement is included after this page.



#### **VERITY**

#### **MASTER AGREEMENT**

This Master Agreement ("Agreement"), entered into effective as of \_\_\_\_\_\_\_\_, 201\_\_\_ ("the Effective Date") by and between Hart InterCivic, Inc., a Texas corporation ("Hart") and the Customer set forth below ("Customer"), sets forth the terms and conditions pursuant to which Customer may procure from Hart certain hardware ("Hardware"), software ("Software") licenses and support services ("Software Support Services"), warranty services ("Warranty Services"), and/or design, engineering, software development, project management, operational training, election event support, and/or other services ("Professional Services"), from time to time. Hardware and Software may be referred to as "Products" and Warranty Services, Software Support Services and/or Professional Services may be referred to as "Services." Products may be "Hart Hardware," and "Hart Proprietary Software," (i.e. "Hart Products") or "Third Party Hardware" and "Sublicensed Software" (i.e. "Third Party Products"). The foregoing may be referred to together as the "Verity system."

Hart agrees to sell or provide to Customer Products and Services according to this Agreement, which includes all Schedules, Attachments and Exhibits. Customer agrees to all terms and conditions of this Agreement. Pricing and other material terms of Customer's initial commitment are as set forth in the Schedule A or Customer Signed Quote attached hereto as **Exhibit A**. This Agreement and Hart's quotations issued hereunder together comprise the complete and exclusive Agreement for the sale of the Products and the provision of the Services. No other terms and conditions sent by Customer shall apply, including any terms or conditions contained in any purchase order, request for quote (RFQ), request for proposal (RFP), communication or other operational form that is in addition to or different than the terms and conditions of this Agreement. Any of Customer's terms and conditions that are different from or in addition to those contained herein are hereby objected to and shall be of no effect unless specifically agreed to in writing by an officer of Hart. Customer acknowledges it has read and understands this Agreement (including all Schedules, Attachments and Exhibits) and is entering into this Agreement only on the basis of the terms set forth in this Agreement (including all Schedules, Attachments and Exhibits).

Agreed and Accepted: Customer Hart Jurisdiction: Hart InterCivic, Inc. Name: 15500 Wells Port Drive Address: Austin, Texas 78728 Phillip W. Braithwaite, CEO Attn.: Phone: 800-223-4278 800-831-1485 Facsimile: E-mail: pbraithwaite@hartic.com Executed By: Phillip W. Braithwaite Name: Title: CEO

This Agreement is not effective until executed by both parties.

Each person signing this Agreement represents and warrants that he or she is duly authorized and has legal capacity to execute and deliver this Agreement.

#### 1. ORDERING

Customer may request quotations for Products or Services from time to time. The existence of this Agreement does not obligate Customer to request a quotation or purchase any Products or Services from Hart. Any Customer request for quotation must include the following information: (i) description of requested Product or Services; (ii) unit quantity and/or desired term; (iii) Hart's part number and/or vendor part number, if applicable; (iv) current unit price as provided by Hart, if applicable; (v) correct shipping address, if applicable; and (vi) any other order information required by Hart. Each request for quotation shall identify the address of the shipping destination, if applicable. Customer may only make a request for quotation via facsimile and other Hart approved electronic ordering methods, including email. All quotations are valid for only 30 days unless specifically stated on the front of the quotation. If the quotation is signed by Customer within thirty (30) days, Hart will provide notice of its acceptance via countersignature within fifteen (15) days of the date on which it receives Customer's signature on the Hart quotation. Failure to provide such written acceptance shall be deemed Hart's rejection of the order. Hart reserves the right to accept or reject any order initiated by Customer in Hart's discretion. Only signed quotations will obligate the parties to the terms of such quotations and this Agreement with respect to the applicable Products and/or Services. Each accepted quotation shall be subject to the terms and conditions of this Agreement.

#### 2. PRICING

- 2.1. <u>Products</u>. Prices for Products shall be specified by Hart in the relevant quotation or proposal and are subject to change without notice, including Prices for backordered Products, however, Prices in quotations or other agreements signed by both Parties are not subject to change. All prices are exclusive of shipping and packing costs, and insurance.
- 2.2. Annual License and Support Fee. The "Annual Fee" is the combined fee for licensing (in the case of Hart Proprietary Software), sublicensing (in the case of Sublicensed Software, if any), and support (a "License and Support Subscription"). Pricing for the initial Annual Fee is the amount specified as the "Initial Annual Fee" on Exhibit A. Pricing for subsequently ordered License and Support Subscriptions shall be specified on the applicable quotation, and unless otherwise specified, shall be pro-rated so as to be co-terminus with the initially-ordered License and Support Subscriptions. Hart may adjust the amount of the Annual Fee for renewal License and Support Subscription terms by notifying Customer of any price changes with the invoice in which the adjustment is made. Unless adjusted by Hart, each renewal Annual Fee will be the same as the Annual Fee for the renewing License and Support Subscription.
- 2.3. Other Services. Pricing for other Services shall be set forth in the applicable quotation, or if not specified, at Hart's then-current hourly rates.
- 2.4. <u>Additional Charges</u>. Additional charges may apply to Services e.g., travel, communication and other expenses. There will be an additional charge at Hart's current technician's rate per hour for any technical work required as a result of other than Hart-recommended equipment purchased by the Customer for use with the Products. Any other additional charges must be mutually agreed to by Hart and Customer and documented in an amendment to this Agreement.
- 2.5. <u>Taxes</u>. All prices are exclusive of applicable taxes. All taxes shall be payable by Customer, unless Customer presents Hart with a proper certificate of exemption from such tax. If Customer challenges the applicability of any such tax, Customer shall pay the tax and may thereafter seek a refund. In the event Hart is required to pay any tax at time of sale or thereafter, Customer shall promptly reimburse Hart therefore.

#### 3. PAYMENT

- 3.1. <u>Products</u>. Except as otherwise provided in Hart's quotation, amounts due for Products shall be billed upon shipment and shall be paid in full within thirty (30) days after delivery.
- 3.2. Annual Fee. The Annual Fee for the initial License and Support Subscription is due upon execution of this Agreement and annually thereafter before expiration thereof. Annual Fees for subsequently ordered License and Support Subscriptions, if any, shall be due upon acceptance of order and unless specified on the applicable quotation, the corresponding Annual Fees for renewals thereof shall be due annually with the renewal of the initially-ordered License and Support Subscription (i.e. shall be pro-rated and become co-terminus). If Customer fails to timely pay an Annual Fee, all Software licenses and Software Support Services will automatically terminate.
- 3.3. Other Services. Amounts due for other Services shall be billed upon the earlier to occur of one or more of the following: first election in which the Professional Services are used; receipt of Services acceptance; not later than sixty (60) days after the date of Customer's first election in which any portion of the Hardware and/or Software is used, and shall be due within thirty (30) days of receipt of invoice.

- 3.4. Payment Mechanics. Customer will pay all amounts due under this Agreement in U.S. Dollars. All payments are to be made to Hart at its principal office in Austin, Texas, as set forth on the signature page or to such other location as may be designated by Hart in a notice to Customer. Hart reserves the right to require C.O.D. payment, a letter of credit, or other security for payment if it determines that such terms are required to assure payment. Customer shall promptly notify Hart in writing of any change to Customer's name, address, or billing information.
- 3.5. <u>Late Fees</u>. Hart may impose interest at the lower of: (1) one and one-half percent (1½%) per month, or (2) the highest rate of interest then permitted by applicable law for all past due balances, compounded monthly and rounded to the next highest whole month. Customer also agrees to pay or reimburse all fees and expenses reasonably incurred by Hart in collecting any amounts due under this Agreement, including, but not limited to, all attorneys' fees associated therewith. Hart shall have the right, in addition to any and all other rights and remedies available at law or in equity, to delay or cancel any deliveries, to reduce or cancel any or all quantity discounts extended to Customer, and/or to suspend the provision of Services if Customer is in default of payments or any other material term of this Agreement.
- 3.6. <u>Billing Disputes</u>. If any dispute exists between the parties concerning the amount due or due date of any payment, Customer shall promptly pay the undisputed portion. Such payment will not constitute a waiver by Customer or Hart of any of their respective legal rights and remedies against each other. Customer has no right of set-off.

#### 4. HARDWARE SPECIFIC TERMS

- 4.1. <u>Delivery</u>. Hart will provide estimated shipment dates upon acceptance of Customer's signed quotation. Shipment dates on Hart quotations are approximate only and Hart will not be subject to liability for late or delayed shipment. In the event Customer is unable to receive the Hardware Products at the time of delivery Hart, at its sole option and convenience, may deliver such products to storage at any suitable location including Hart's facilities. All costs incurred by Hart for the transportation, storage, and insurance of such Hardware Products shall be borne by Customer.
- 4.2. Hart Voting System Equipment Pick-Up. If Customer has legacy Hart Voting System (HVS) equipment, Hart will pick up and salvage all HVS voting devices, computers, and peripherals at no cost to Customer. Customer may retain databases and reports stored on such equipment solely to comply with record retention policies. Customer may retain minimal necessary computers and copies of legacy software for access to records retention databases. Customer agrees to remove all HVS software from all retained computers at the close of the records retention period. Upon request, Customer will provide Hart with written certification that such software has been deleted.
- 4.3. Acceptance. Customer shall examine all Hardware Products promptly upon receipt thereof. Within ten (10) business days of such receipt, Customer shall notify Hart in writing of any manner in which Customer claims that the Hardware Products fail to conform to their applicable specification, or as to any claimed shortages, or shipments errors. If no written notification is received by Hart within such period, the Hardware Products delivered hereunder shall be deemed accepted by Customer ("Hardware Acceptance"). Hardware Product will be deemed conforming if it meets Hart's published specification for such Product, and any specifications identified on the applicable quotation. Upon Customer's Acceptance, any defects in material or workmanship shall be addressed pursuant to the warranty in Section 9 below.
- 4.4. <u>Installation</u>: A Hart representative may install the Hardware Products at the Customer's site on a mutually agreed upon date during Hart's normal working hours, within ten (10) business days of delivery, or as soon as is practicable for both parties. Billing will occur on the date the Hardware is shipped to the Customer's site, per Section 3.1 If additional labor and rigging or Customer-specified customization is required for installation due to Customer's special site requirements, Customer will pay those costs including costs to meet union or local law requirements.
- 4.5. <u>Title and Transportation</u>. Hardware Products are shipped Ex Works (Incoterms 2010) from Hart's designated shipping point. Title transfer and transfer of risk of loss or damage shall be deemed to occur upon Hart making such Hardware Products available to the carrier at Hart's designated shipping point. Hart reserves the right to select the method and routing of transportation and the right to make delivery in installments unless otherwise specified at the time of quotation acceptance by Hart but in no event will the carrier be deemed the agent of Hart. Notwithstanding the foregoing, if customer chooses a financing option offered by Hart, then title to hardware will pass to Customer according to the terms of the finance agreement.
- 4.6. Rescheduling and Cancellation. Except in the event of unreasonable delays beyond the quoted delivery dates or an uncured default of a material term of this Agreement by Hart, Customer shall not have the right to change, cancel, or reschedule an accepted quotation in whole or in part without the prior consent of Hart. In the event Customer requests a rescheduling of any Hardware Product and such request is accepted by Hart, Customer agrees to promptly pay Hart's standard reschedule charge. Hart may not cancel a quotation after it has accepted Customer's signed submission thereof. Customer may not cancel an order after submission to Hart of a signed quotation. Any cancellations following such times will be at the non-cancelling party's sole discretion and upon terms dictated by the non-cancelling party.

## 5. SOFTWARE SPECIFIC TERMS

- 5.1. License. Subject to the terms and conditions of this Agreement and for so long as Customer has a current License and Support Subscription in effect, Hart grants to Customer (i) a personal, nonexclusive, nontransferable, and limited license to use the Hart Proprietary Software (which includes Firmware, meaning the Hart Proprietary Software embedded in any Verity system device that allows execution of the software functions) and (ii) a personal, nonexclusive, nontransferable, and limited sublicense to use the Sublicensed Software, if applicable. With this right to use, Hart will provide Customer, and Customer will be permitted to use, only the run-time executable code and associated support files of the Software for Customer's internal data processing requirements as part of the Verity system. The Software may be used only at the Licensed Location specified as the jurisdiction on the signature page of this Agreement and only on the hardware or other computer systems authorized by Hart in writing. Customer's use of the Software will be limited to the number of licenses specified in the applicable quotation. Only Customer and its authorized employees, agents or contractors may use or access the Software. For applicable components, Voters are also authorized to interact with the Software, in a manner consistent with user instructions, for the sole purpose of producing a Cast Vote Record during the course of an election. To the extent Hart Proprietary Software contains embedded third party software, third party licenses may apply. More information concerning embedded third party software can be found in the application's "Help->About" and is available upon written request. Such embedded third party software is distinguished from "Sublicensed Software" which is stand-alone software not part of Hart Proprietary Software that may be included under this Agreement. See Exhibit D for a listing of Hart Proprietary Software and Sublicensed Software.
- 5.2. Records and Audit. Customer shall keep clear, complete and accurate books of account and records with respect to the usage of Software and access to the Software licensed hereunder, including without limitation with respect to access thereto. Licensee shall retain such books and records for a period of five (5) years from the date of cessation of any such usage, notwithstanding any expiration or termination of this Agreement. Customer agrees that during the term of this Agreement and such period, Hart, the licensors of any Sublicensed Software, and their representatives may periodically inspect, conduct, and/or direct an independent accounting firm to conduct an audit, at mutually agreed-upon times during normal business hours, of the computer site, computer systems, and appropriate records of Customer to verify Customer's compliance with the terms of the licenses and sublicenses granted to Customer. If any such examination discloses unauthorized usage, then Customer, in addition to paying such payment then due and without limiting Hart's remedies, shall pay the reasonable fees for the audit.

#### 5.3. Restrictions

- 5.3.1. The Hart Hardware and Hart Proprietary Software are designed to be used only with each other and/or the agreed-upon Sublicensed Software (if any) and Third Party Hardware. To protect the integrity and security of the Verity system, Customer shall comply with the following practices and shall not deviate from them without the express written consent of Hart: (i) Customer shall use the Software and Hardware only in connection with the Verity system, and Customer may only use Hart branded or approved peripherals and consumables with the Verity system.; (ii) Customer shall not install or use other software on or with the Hardware or Software or network the Hardware or Software with any other hardware, software, equipment, or computer systems; and (iii) Customer shall not modify the Hardware or Software. If Customer does not comply with any provisions of this Section 5.3, then (i) the Limited Warranties under Section 9 and the licenses and sublicenses granted under Section 5.1 will automatically terminate; (ii) Hart may terminate its obligation to provide Software Support Services under Section 8; (iii) Hart will have no further installation obligations. Furthermore, if Customer uses the Software and Hardware in combination with other software and equipment (other software or equipment being those not provided by Hart or its designees), and the combination infringes Hart proprietary patent claims outside the scope of the software license granted to Customer under Section 5.1, Hart reserves its rights to enforce its patents with respect to those claims.
- 5.3.2. Customer shall not, under any circumstances, cause or permit the adaptation, conversion, reverse engineering, disassembly, or de-compilation of any Software. Customer shall not use any Software for application development, modification, or customization purposes, except through Hart.
- 5.3.3. Customer shall not assign, transfer, sublicense, time-share, or rent the Software or use it for facility management or as a service bureau serving others outside of the jurisdiction. This restriction does not preclude or restrict Customer from contracting for election services for other local governments located within Customer's jurisdictional boundaries. Customer shall not modify, copy, or duplicate the Software. All use of software and hardware on which the software resides shall take place and be for activities within Customer's jurisdictional boundaries, except for in cases of joint elections conducted cooperatively with neighboring jurisdictions. All copies of the Software, in whole or in part, must contain all of Hart's or the third-party licensor's titles, trademarks, copyright notices, and other restrictive and proprietary notices and legends (including government-restricted rights) as they appear on the copies of the Software provided to Customer. Customer shall notify Hart of the following: (i) the location of all Software and all copies thereof and (ii) any circumstances known to Customer regarding any unauthorized possession or use of the Software.
- 5.3.4. Customer shall not publish any results of benchmark tests run on any Software.
- 5.3.5. The Software is not developed or licensed for use in any nuclear, aviation, mass transit, or medical application or in any other inherently dangerous applications. Customer shall not use the Software in any inherently dangerous application and agrees that Hart and any third-party licensor will not be liable for any claims or damages arising from such use.

#### 6. DOCUMENTATION

Hart will provide Customer with one (1) electronic copy of the standard user-level documentation and operator's manuals and where applicable, environmental specifications for the Product installed at the Customer's location before the first election for which the Product will be used, following installation.

#### 7. PROPRIETARY RIGHTS

- 7.1. Reservation of Rights. Customer acknowledges and agrees that the design of the Products, and any and all related patents, copyrights, trademarks, service marks, trade names, documents, logos, software, microcode, firmware, information, ideas, concepts, know-how, data processing techniques, documentation, diagrams, schematics, equipment architecture, improvements, code, updates, trade secrets and material are the property of Hart and its licensors. Customer agrees that the sale of the Hardware and license of the Software does not, other than as expressly set forth herein, grant to or vest in Customer any right, title, or interest in such proprietary property. All patents, trademarks, copyrights, trade secrets, and other intellectual property rights, whether now owned or acquired by Hart with respect to the Products, are the sole and absolute property of Hart and its licensors. Customer shall not, under any circumstances, cause or permit the adaptation, conversion, reverse engineering, disassembly, or de-compilation of any Product(s), or copy, reproduce, modify, sell, license, or otherwise transfer any rights in any proprietary property of Hart. Further Customer shall not remove any trademark, copyright, or other proprietary or restrictive notices contained on any Hart user documentation, operator's manuals, and environmental specifications, and all copies will contain such notices as are on the original electronic media. Intellectual Properties. All ideas, concepts, know-how, data processing techniques, documentation, diagrams, schematics, firmware, equipment architecture, software, improvements, code, updates, and trade secrets developed by Hart personnel (alone or jointly with others, including Customer) in connection with Confidential Information, Verity system, and Hart Proprietary Software will be the exclusive property of Hart.
- 7.2. <u>Customer Suggestions and Recommendations</u>. Customer may propose, suggest, or recommend changes to the Products at any time. Such proposals, suggestions, or recommendations will become Hart's property and are hereby assigned to Hart. Hart may include any such proposals, suggestions, or recommendations, solely at Hart's option, in subsequent periodic Product updates, without restriction or obligation. Hart is under no obligation to change, alter, or otherwise revise the Products according to Customer's proposals, suggestions, or recommendations.
- 7.3. <u>License Back</u> If Customer possesses or comes to possess a licensable or sub-licensable interest in any issued patent with claims that read upon the Verity system, its method of operation, or any component thereof, Customer hereby grants and promises to grant a perpetual, irrevocable, royalty-free, paid-up license, with right to sublicense, of such interest to Hart permitting Hart to make, have made, use, and sell materials or services within the scope of the patent claims.

## 8. SOFTWARE SUPPORT SERVICES

- 8.1. <u>Description of Software Support Services</u>. Subject to the terms and conditions of this Agreement and for so long as Customer has the requisite number of License and Support Subscriptions in effect, Hart will provide Customer the Software Support Services described below. Software Support Services under this Section do not cover any of the exclusions from warranty and support coverage as described under Section 9. If Hart, in its discretion, provides Software Support Services in addition to the services described under this Section, Customer will pay Hart for such services on a time-and-materials basis at Hart's then-prevailing rates, plus expenses, and for replacements at Hart's list prices, unless otherwise agreed in writing by Hart and Customer.
- 8.1.1. Software Support Services. Software Support Services will consist of assisting the Customer in the use of software for purposes of election administration, including functions related to pre-election and post-election testing and general operation of the Verity system. Assistance is available via phone and email through the Hart Customer Support Center. See Exhibit B for Hart Customer Support contact information and hours.

Software Support Services may consist of periodic updates to Hart Proprietary Software, at Hart's discretion. Because not all errors or defects can or need to be corrected, Hart does not warrant that all errors or defects will be corrected. Software errors or defects must be reported in writing and be accompanied with sufficient detail to enable Hart staff to reproduce the error and provide a remedy or suitable corrective action. The exclusions from warranty coverage under Section 9.5 also are exclusions from Software Support Services under this Section. There may be consumable, shipping and on-site service charges for update releases of software and there may be feature charges for update or enhancement releases of software.

## 9. WARRANTY AND EXTENDED WARRRANTY

- 9.1. <u>Certification</u>. Where applicable, Verity system components that require certification will meet the certification requirements in place on the effective date of the Master Agreement.
- 9.2. <u>Hart Hardware Limited Warranty</u>. Hart warrants that during the warranty period, the Hart Hardware purchased by Customer will be free from defects in materials and workmanship and will substantially conform to the performance specifications stated in the Verity Operator's Manuals for the Hart Hardware applicable at the time of the installation of the Hardware. The warranty

period for new Hart Hardware (other than Consumables) is one (1) year, beginning ten (10) days after the shipping date. The warranty period for used and/or refurbished hardware is ninety (90) days, beginning ten (10) days after the shipping date. Consumables are warranted only to be free from manufacturing defects for a period ninety (90) days, beginning ten (10) days after the shipping date. Hart will, at Hart's sole discretion, replace or repair any Hart Hardware that does not comply with this warranty, at no additional charge to Customer. To request warranty service, Customer must contact Hart in writing within the warranty period. Hart may elect to conduct any repairs at Customer's site, Hart's facility, or any other location specified by Hart. Any replacement Hart Hardware provided to Customer under this warranty may be new or reconditioned. Hart may use new and reconditioned parts in performing warranty repairs and building replacement products. If Hart repairs or replaces Hart Hardware, its warranty period is not extended and will terminate upon the end of the warranty period of the replaced or repaired Hart Hardware. Hart owns all replaced Hart Hardware and all parts removed from repaired products. Customer acknowledges and agrees that this warranty is contingent upon and subject to Customer's proper use of the Verity system and the Exclusions from Warranty and Software Support Services set forth in Section 9.5. This warranty does not cover any Hart Hardware that has had the original identification marks and/or numbers removed or altered in any manner. This warranty does not include any type of routine maintenance service or preventative maintenance service. This Hardware Limited Warranty may be extended after the initial period under separate Extended Hardware Warranty agreements, subject to the order process contemplated by Section 1. Extended warranties exclude consumable items, including all types of batteries, vDrives and paper ("Consumables"). Renewal of the annual License and Support Subscription does not, in itself, extend the Hardware Limited Warranty. The remedies set forth in this Section are the full extent of Customer's remedies and Hart's obligations regarding this warranty. If the Hart Hardware is required to be reconfigured, modified, or otherwise changed after its sale to and installation at the Customer's location due to the Customer's or a local, state, or federal government certification change(s) or due to any statutory changes or new requirements, Hart will determine the feasibility and cost of the required changes and advise the Customer of the total amount due for those Hart Hardware changes. Upon written approval to move forward with the changes and receipt from the Customer of the stated fees, Hart will complete the required changes to the Customer's Hart Hardware. THIS LIMITED WARRANTY DOES NOT APPLY TO ANY THIRD PARTY HARDWARE.

- 9.3. Hart Proprietary Software Limited Warranty. Hart warrants that beginning ten (10) days after the shipping of the Hart Proprietary Software and for so long as Customer has the requisite number of License and Support Subscriptions in effect, the Hart Proprietary Software will perform substantially according to the then-current functional specifications described in the applicable software Operators' Manuals accompanying such Hart Proprietary Software. To request warranty service, Customer must contact Hart in writing within the warranty period. Failure to conform to the warranty must be reported in writing and be accompanied with sufficient detail to enable Hart to reproduce the error and provide a remedy or suitable corrective action (a solution that will allow the software to function appropriately). Hart will make commercially reasonable efforts to remedy or provide a suitable workaround for defects, errors, or malfunctions covered by this warranty that have a significant adverse effect upon operation of the Hart Proprietary Software. Because not all errors or defects can or need to be corrected, Hart does not warrant that all errors or defects will be corrected. Customer acknowledges and agrees that this warranty is contingent upon and subject to Customer's proper use of the Verity system and the Exclusions from Warranty and Support Coverage set forth in Section 9.5. The remedies set forth in this Section 9.3 are the full extent of Customer's remedies and Hart's obligations regarding this warranty. THIS LIMITED WARRANTY DOES NOT APPLY TO ANY SUBLICENSED SOFTWARE.
- 9.4. **Professional Services Warranty**. Hart represents and warrants that any Professional Services shall be performed in a professional and workmanlike manner.
- Exclusions from Warranty and Software Support Services. The warranties under this Section and Software Support under 9.5. Section 8 do not cover defects, errors, or malfunctions that are caused by any external causes, including, but not limited to, any of the following: (a) Customer's failure to follow operational, support, or storage instructions as set forth in applicable documentation; (b) the use of incompatible media, supplies, parts, or components; (c) modification or alteration of the Verity system, or its components, by Customer or third parties not authorized by Hart; (d) use of equipment or software not supplied or authorized by Hart; (e) external factors (including, without limitation, power failure, surges or electrical damage, fire or water damage, air conditioning failure, humidity control failure, or corrosive atmosphere harmful to electronic circuitry); (f) failure to maintain proper site specifications and environmental conditions; (g) negligence, accidents, abuse, neglect, misuse, or tampering; (h) improper or abnormal use or use under abnormal conditions; (i) use in a manner not authorized by this Agreement or use inconsistent with Hart's specifications and instructions; (j) use of software on Equipment that is not in good operating condition; (k) acts of Customer, its agents, servants, employees, or any third party; (l) servicing or support not authorized by Hart; (m) Force Majeure; or (n) Consumables, unless expressly set forth in Section 9.2. In any case where Hart Proprietary Software interfaces with third party software, including but not limited to, the Customer's voter registration system, non-Hart election management system, early voting validation system, non-Hart election systems, absentee envelope management systems, or other like systems, Hart will not be responsible for proper operation of any Software that interfaces with the third party software should such third party software be updated, replaced, modified, or altered in any way. Hart will also not be responsible for the proper operation of any Software running on Customer's computer equipment, should Customer install a new computer operating system on said equipment without advising Hart of such changes and receiving Hart's written approval. Hart will not be responsible for the proper operation of any Software should it be configured or operated in any manner contrary than that described herein. Professional Services and associated costs may be required in those situations where the Customer requests Hart's review and approval of any system changes outside the original system specifications at the time of the original acceptance date of this Agreement. Hart reserves the right to charge for repairs on a time-and-materials basis at Hart's thenprevailing rates, plus expenses, and for replacements at Hart's list prices caused by these exclusions from warranty and support coverage.

- 9.6. Third Party Hardware and Sublicensed Software Excluded. HART MAKES NO REPRESENTATIONS OR WARRANTIES AS TO THIRD PARTY HARDWARE AND SUBLICENSED SOFTWARE, IF ANY, PROVIDED BY HART TO CUSTOMER, ALL OF WHICH IS SOLD, LICENSED, OR SUBLICENSED TO CUSTOMER "AS IS," OTHER THAN AS MAY BE PROVIDED IN ANY PASS-THROUGH WARRANTY DESCRIBED BELOW. HART HAS NO RESPONSIBILITY OR LIABILITY FOR THIRD PARTY HARDWARE AND SUBLICENSED SOFTWARE, IF ANY, PROVIDED BY HART'S DISTRIBUTORS OR OTHER THIRD PARTIES TO CUSTOMER. If Hart sells, licenses, or sublicenses any Third Party Hardware or Sublicensed Software to Customer, Hart will pass through to Customer, on a nonexclusive basis and without recourse to Hart, any third-party manufacturer's warranties covering the equipment or software, but only to the extent, if any, permitted by the third-party licensor. For a list of Third Party Hardware, see Exhibit A. For a list of Sublicensed Software, see Exhibit D or the applicable order. The disclaimers in this Section 9.6 are not intended to apply to embedded third party software integrated within the Hart Proprietary Software, contemplated by Section 5.1.
- 9.7. <u>Limited Remedies</u>. HART'S SOLE RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN PRODUCTS AND SERVICES IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN, AND TO THE EXTENT SET FORTH IN, THIS WARRANTY TERMS SECTION.

## 10. PROFESSIONAL SERVICES

10.1. <a href="Professional Services">Professional Services</a>. Subject to the terms and conditions of this Agreement, Hart will provide Customer (i) operational training and on-site support at the first election in which the Products are used, and (ii) the Professional Services described in each Hart-accepted, Customer-signed quotation. Professional Service days cannot be exchanged for Product fees, Annual Fees, or fees for other Services. If the Professional Services in an applicable quotation are not used prior to 60 days after the date of the Customer's first election in which any portion of the Product is used, Hart's Professional Services obligations shall expire and unused days will be billed to the Customer without recovery of amounts paid in advance for Professional Services.

## 11. REPRESENTATIONS AND WARRANTIES

- 11.1. <u>Due Organization</u>. Each party represents that it is duly organized, validly existing, and in good standing in the jurisdiction of its organization, and that it has the requisite power and authority to execute and deliver this Agreement and to carry out the transactions contemplated by this Agreement.
- 11.2. <u>Conflicting Agreements</u>. Each party represents and warrants that it has no outstanding agreement or obligation that is in conflict with any of the provisions of this Agreement, or that would preclude it from complying with the provisions hereof.

#### 12. CUSTOMER RESPONSIBILITIES

- 12.1. <u>Independent Determination</u>. Customer acknowledges it has independently determined that the Products purchased under this Agreement meet its requirements
- 12.2. Cooperation. Customer agrees to cooperate with Hart and promptly perform Customer's responsibilities hereunder. Customer will (a) provide adequate working and storage space for use by Hart personnel near the applicable Hardware; (b) provide Hart full access to the Hardware and Software and sufficient computer time, subject to Customer's security rules; (c) follow Hart's procedures for placing hardware warranty or software support service requests and determining if warranty remedial service is required; (d) follow Hart's instructions for obtaining hardware and software support and warranty services; (e) provide a memory dump and additional data in machine-readable form if requested; (f) reproduce suspected errors or malfunctions in Software; (g) provide timely access to key Customer personnel and timely respond to Hart's questions; and (h) otherwise cooperate with Hart in its performance under this Agreement.
- 12.3. <u>Site Preparation</u>. Customer shall prepare and maintain the installation site in accordance with instructions provided by Hart. Customer is responsible for environmental requirements, electrical interconnections, and modifications to facilities for proper installation, in accordance with Hart's specifications. Any delays in preparation of the installation site will correspondingly extend Hart's delivery and installation deadlines.
- 12.4. <u>Site Maintenance; Proper Storage</u>. Customer shall maintain the appropriate operating environment, in accordance with Hart's specifications, for the Products and all communications equipment, telephone lines, electric lines, cabling, modems, air conditioning, and all other equipment and utilities necessary for the Products to operate properly. Customer shall properly store the Products when not in use.
- 12.5. <u>Use</u>. Customer is exclusively responsible for supervising, managing, and controlling its use of the Products, including, but not limited to, establishing operating procedures and audit controls, supervising its employees, making timely data backups, inputting data, ensuring the accuracy and security of data input and data output, monitoring the accuracy of information obtained, and managing the use of information and data obtained. Customer will ensure that its personnel are, at all times, educated and trained in the proper use and operation of the Products and that the Hardware and Software are used in accordance with

applicable manuals, instructions, and specifications. Customer shall comply with all applicable laws, rules, and regulations with respect to its use of the Products.

12.6. <u>Backups</u>. Customer is solely responsible for timely data backups, and Customer will maintain backup data necessary to replace critical Customer data in the event of loss or damage to data from any cause. Hart is not liable for data loss.

#### 13. TERM AND TERMINATION

# 13.1. **Term**.

- 13.1.1. Of Agreement. Unless earlier terminated as set forth herein, the initial term of this Agreement is one (1) year.
- 13.1.2. Of License and Support Subscription. Unless earlier terminated as set forth herein, the initial term of the License and Support Subscriptions is one (1) year. Unless otherwise provided in the applicable quotation subsequently ordered License and Support Subscriptions shall be pro-rated so as to be co-terminus with the initially ordered License and Support Subscriptions.
- 13.1.3. Of Hardware Warranty. Unless earlier terminated as set forth herein, the initial term of new Hardware Warranties is one (1) year.

#### 13.2. Renewals.

- 13.2.1. *Of Agreement.* This Agreement shall automatically renew for successive periods of one (1) year following the initial term unless one party notifies the other of its intent <u>not</u> to renew not less than ninety (90) days prior to the end of the then-current term.
- 13.2.2. Of License and Support Subscriptions. Except as otherwise provided in this Agreement, Customer must renew License and Support Subscriptions before their expiration by paying the Annual Fee invoiced by Hart, as provided in Section 2.2, before the anniversary date immediately following the date of invoice. Each renewal License and Support Subscriptions term will be a one (1) year, commencing on the expiration of the prior term and expiring on the immediately following anniversary date.
- 13.2.3. Hardware Warranties. Hardware warranties may be extended through a separate Extended Hardware Warranty, ordered in accordance with Section 1. Renewal of this Master Agreement and the License and Support Subscription do not, in themselves, extend hardware warranties.

## 13.3. **Termination**.

- 13.3.1. By Hart. This Agreement and/or all then-current License and Support Subscriptions and Professional Services orders shall automatically terminate or expire as set forth herein and may be terminated by Hart if Customer is in breach of a term hereof and fails to cure such breach within thirty (30) days after written notice of such breach has been given.
- 13.3.2. By Customer. Customer may terminate this Agreement, a Product order, or a License and Support Subscriptions and Professional Services orders issued hereunder if Hart is in breach of a term hereof or thereof, as applicable, and fails to cure such breach within thirty (30) days after written notice of such breach has been given.
- 13.4. Effect of Expiration and Termination. Any termination under Section 13.3.1 shall operate to terminate this Agreement and any then current License and Support Subscriptions and Professional Services orders. Any termination under Section 13.3.2 of a License and Support Subscription or Professional Services order shall operate only upon such subscription or order, and shall have no effect on this Agreement or other subscriptions or orders then in effect. Sections 3, 5.2-5.4, 7, 9.5-9.7, 12, 13.4, and 14-18 shall survive any termination or expiration of this Agreement or the applicable License and Support Subscription and/or Professional Services order. All other rights and obligations shall be of no further force or effect.

## 14. CONFIDENTIALITY

- 14.1. <u>Definition</u>. "Confidential Information" means any information related to Hart's business or the Verity system, including but not limited to technical data, trade secrets, know-how, research, product plans, products, services, customers, customer lists, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, or other business information. Confidential Information includes, without limitation, all Software, the Documentation and support materials, and the terms and conditions of this Agreement.
- 14.2. Non-Use and Non-Disclosure. Customer will keep in confidence and protect Confidential Information (electronic or hard copy) from disclosure to third parties and restrict its use to uses expressly permitted under this Agreement. Customer shall take all reasonable steps to ensure that the trade secrets and proprietary data contained in the Hardware and Software and the other Confidential Information are not disclosed, copied, duplicated, misappropriated, or used in any manner not expressly permitted by the terms of this Agreement. Customer shall keep the Software and all tapes, diskettes, CDs, and other physical embodiments of them,

and all copies thereof, at a secure location and limit access to those employees who must have access to enable Customer to use the Software. Customer acknowledges that unauthorized disclosure of Confidential Information may cause substantial economic loss to Hart or its suppliers and licensors.

- 14.3. Return of Confidential Information. Upon termination or expiration of this Agreement or, if earlier, upon termination of Customer's permitted access to or possession of Confidential Information, Customer shall return to Hart all copies of the Confidential Information in Customer's possession (including Confidential Information incorporated in software or writings, electronic and hard copies). Upon termination of Customer's license or sublicense of Software, Customer shall immediately discontinue all use of the Software and return to Hart or destroy at Hart's option, the Software, including Firmware (and all related Documentation (electronic and hard copy)) and all archival, backup, and other copies of Software, Firmware and Documentation, and provide certification to Hart of such return or destruction. Return or destruction may include hard drives and/or component flash drive devices.
- 14.4. <u>Customer Employees, Agents and Contractors</u>. Customer will inform its employees and other agents and contractors of their obligations under this Section 14 and shall be fully responsible for any breach thereof by such personnel.

#### 15. INDEMNIFICATION

- 15.1. <u>Indemnity</u>. Hart, at its own expense, will defend Customer against any claim that the Hart Hardware or Hart Proprietary Software infringes an issued United States patent, registered United States copyright, or misappropriates trade secrets protected under United States law, and shall indemnify Customer against and pay any costs, damages and reasonable attorneys' fees attributable to such claim that are finally awarded against Customer, provided Customer (a) gives Hart prompt written notice of such claims; (b) permits Hart to control the defense and settlement of the claims; and (c) provides all reasonable assistance to Hart in defending or settling the claims.
- 15.2. Remedies. As to Hart Hardware or Hart Proprietary Software that is subject to a claim of infringement or misappropriation, Hart may (a) obtain the right of continued use of the Hart Hardware or Hart Proprietary Software for Customer or (b) replace or modify the Hart Hardware or Hart Proprietary Software to avoid the claim. If neither alternative is available on commercially reasonable terms, then, at the request of Hart, any applicable Software license and its charges will end, Customer will cease using the applicable Hart Hardware and Hart Proprietary Software, Customer will return to Hart all applicable Hart Hardware and return or destroy all copies of the applicable Hart Proprietary Software, and Customer will certify in writing to Hart that such return or destruction has been completed. Upon return or Hart's receipt of certification of destruction, Hart will give Customer a credit for the price paid to Hart for the returned or destroyed Hart Hardware and Hart Proprietary Software, less a reasonable offset for use and obsolescence.
- 15.3. Exclusions. Hart will not defend or indemnify Customer if any claim of infringement or misappropriation (a) is asserted by an affiliate of Customer; (b) results from Customer's design or alteration of any Hardware or Software; (c) results from use of any Hart Hardware or Hart Proprietary Software in combination with any non-Hart product, except to the extent, if any, that such use in combination is restricted to the Verity system designed by Hart; (d) relates to Sublicensed Software or Third Party Hardware alone; or (e) arises from Customer-specified customization work undertaken by Hart or its designees in response to changes in Hart Proprietary Software or Sublicensed Software that are made in response to Customer specifications.
- 15.4. **EXCLUSIVE REMEDIES**. THIS SECTION 15 STATES THE ENTIRE LIABILITY OF HART AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES FOR INFRINGEMENT AND TRADE SECRET MISAPPROPRIATION.

#### 16. DISCLAIMERS AND LIMITATIONS OF LIABILITY

- 16.1. <u>Disclaimer of Warranty</u>. EXCEPT FOR THE EXPRESS LIMITED WARRANTIES APPLICABLE TO THE PRODUCT(S) AND/OR SERVICES SET FORTH IN SECTION 9, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, (A) THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE UNDER THIS AGREEMENT, AND (B) HART DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, TITLE AND NONINFRINGEMENT FOR ALL HARDWARE, SOFTWARE, AND SERVICES. CUSTOMER IS SOLELY RESPONSIBLE FOR ASSURING AND MAINTAINING THE BACKUP OF ALL CUSTOMER DATA. UNDER NO CIRCUMSTANCES WILL HART BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR THE LOSS OF OR DAMAGE TO CUSTOMER DATA THE EXPRESS LIMITED WARRANTIES REFERENED ABOVE EXTEND SOLELY TO CUSTOMER AND DO NOT INCLUDE ANY TYPE OF ROUTINE MAINTECNANCE SERVICE OR PREVENTATIVE MAINTENANCE SERVICE. SOME STATES (OR JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY.
- 16.2. <u>Limitations of Liability</u> NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, HART WILL NOT BE LIABLE TO CUSTOMER FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS) OR FOR LOST DATA SUSTAINED OR INCURRED IN CONNECTION WITH THE HARDWARE, SOFTWARE, SERVICES, OR THIS AGREEMENT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, REGARDLESS OF THE FORM OF ACTION AND WHETHER

OR NOT SUCH DAMAGES ARE FORESEEABLE. IN ADDITION, HART'S TOTAL LIABILITY TO CUSTOMER FOR DAMAGES ARISING OUT OF OR RELATING TO THE HARDWARE, SOFTWARE, SERVICES, AND THIS AGREEMENT WILL IN NO EVENT EXCEED THE TOTAL AMOUNT ACTUALLY PAID BY CUSTOMER TO HART UNDER THIS AGREEMENT UNDER THE ORDER FOR THE HARDWARE, SOFTWARE OR SERVICE GIVING RISE TO THE APPLICABLE CLAIM. HART IS NOT LIABLE FOR DAMAGES CAUSED IN ANY PART BY CUSTOMER'S NEGLIGENCE OR INTENTIONAL ACTS OR, EXCEPT AS EXPRESSLY SET FORTH HEREIN, FOR ANY CLAIM AGAINST CUSTOMER OR ANYONE ELSE BY ANY THIRD PARTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF DAMAGES, SO THE ABOVE EXCLUSIONS AND/OR LIMITATIONS MAY NOT APPLY TO CUSTOMER. THE PARTIES AGREE THAT THE LIABILITY AND WARRANTY LIMITATIONS SET FORTH IN THIS AGREEMENT ARE A REASONABLE ALLOCATION OF RISK AND LIABILITY CONSIDERING THE RESPECTIVE BENEFITS OBTAINED HEREUNDER. THE FOREGOING LIMITATIONS SHALL APPLY NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY HEREIN.

16.3. Third Party Products, Services and Referrals. In addition to Third Party Products that may be ordered hereunder, Hart may direct Customer to third parties having products or services that may be of interest to Customer for use in conjunction with the Products or Services. Notwithstanding any Hart recommendation, referral, or introduction, Customer will independently investigate and test non-Hart products and services and will have sole responsibility for determining suitability for use of non-Hart products and services. Hart has no liability with respect to claims relating to or arising from use of non-Hart products and services, including, without limitation, claims arising from failure of non-Hart products to provide proper time and date functionality.

## 17. DISPUTE RESOLUTION

- 17.1. <u>Disputes and Demands</u>. The parties will attempt to resolve any claim or controversy related to or arising out of this Agreement, whether in contract or in tort ("**Dispute**"), on a confidential basis according to the following process, which either party may start by delivering to the other party a written notice describing the dispute and the amount involved ("**Demand**").
- 17.2. <u>Negotiation and Mediation</u>. After receipt of a Demand, authorized representatives of the parties will meet at a mutually agreed-upon time and place to try to resolve the Dispute by negotiation. If the Dispute remains unresolved after this meeting, either party may start mandatory nonbinding mediation under the commercial mediation rules of the American Arbitration Association ("AAA") or such other mediation process as is mutually acceptable to the parties.
- 17.3. <u>Injunctive Relief.</u> Notwithstanding the other provisions of this Section 17, if either party seeks injunctive relief, such relief may be sought in a court of competent jurisdiction without complying with the negotiation and mediation provisions of this Section.
- 17.4. <u>Time Limit</u>. Neither mediation under this section nor any legal action, regardless of its form, related to or arising out of this Agreement may be brought more than two (2) years after the cause of action first accrued.

## 18. GENERAL PROVISIONS

- 18.1. Entire Agreement. This Agreement and the Schedules, Attachments, and Exhibits hereto (including Hart-provided quotations signed by Customer and accepted by Hart) are the entire agreement between the parties with respect to the subject matter contemplated herein, and supersede all prior negotiations and oral agreements with respect thereto. Hart makes no representations or warranties with respect to this Agreement or its Products or Services that are not included herein. The use of preprinted Customer forms, such as purchase orders or acknowledgments, in connection with this Agreement is for convenience only and all preprinted terms and conditions stated thereon are void and of no effect. If any conflict exists between this Agreement and any terms and conditions on a Customer purchase order, acknowledgment, or other Customer preprinted form, the terms and conditions of this Agreement will govern and the conflicting terms and conditions in the preprinted form will be void and of no effect. This Agreement may not be amended or waived except in writing signed by an officer of the party to be bound thereby.
- 18.2. <u>Interpretation</u>. This Agreement will be construed according to its fair meaning and not for or against either party. Headings are for reference purposes only and are not to be used in construing the Agreement. All words and phrases in this Agreement are to be construed to include the singular or plural number and the masculine, feminine, or neuter gender as the context requires.
- 18.3. **GOVERNING LAW.** THIS AGREEMENT WILL BE GOVERNED BY THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ITS CONFLICT OF LAW PROVISIONS, UNLESS CUSTOMER IS A GOVERNMENTAL SUBDIVISION OF ANOTHER STATE, IN WHICH CASE THE LAWS OF THE STATE IN WHICH CUSTOMER IS A GOVERNMENTAL SUBDIVISION WILL CONTROL.
- 18.4. <u>Severability</u>. Whenever possible, each provision of this Agreement will be interpreted to be effective and valid under applicable law; but if any provision is found to be invalid, illegal, or unenforceable, then such provision or portion thereof will be modified to the extent necessary to render it legal, valid, and enforceable and have the intent and economic effect as close as possible to the invalid, illegal, or unenforceable provision. If it is not possible to modify the provision to render it legal, valid, and enforceable, then the provision will be severed from the rest of the Agreement and ignored. The invalidity, illegality, or unenforceability of any

provision will not affect the validity, legality, or enforceability of any other provision of this Agreement, which will remain valid and binding.

- 18.5. Force Majeure. "Force Majeure" means a delay encountered by a party in the performance of its obligations under this Agreement that is caused by an event beyond the reasonable control of the party, but does not include any delays in the payment of monies due by either party. Without limiting the generality of the foregoing, "Force Majeure" will include, but is not restricted to, the following types of events: acts of God or public enemy; acts of governmental or regulatory authorities (other than, with respect to Customer's performance, the Customer, and its governing entities); fires, floods, epidemics, or serious accidents; unusually severe weather conditions; failure of third parties to timely provide software, hardware, materials, or labor contemplated herein including by reason of strikes, lockouts, or other labor disputes. If any event constituting Force Majeure occurs, the affected party shall notify the other party in writing, disclosing the estimated length of the delay and the cause of the delay. If a Force Majeure or other such event occurs, the affected party will not be deemed to have violated its obligations under this Agreement, and time for performance of any obligations of that party will be extended by a period of time necessary to overcome the effects of the Force Majeure.
- 18.6. <u>Compliance with Laws</u>. Customer and Hart shall comply with all federal, state, and local laws in the performance of this Agreement, including those governing use of the Products. Products provided under this Agreement may be subject to U.S. and other government export control regulations. Customer shall not export or re-export any Products.
- 18.7. <a href="Assignment">Assignment</a>. Hart may assign this Agreement or its interests herein any including the right to receive payments, without Customer's consent. Customer will be notified in writing if Hart makes an assignment of this Agreement. Customer shall not assign this Agreement or any licenses granted hereunder without the express written consent of Hart, such consent not to be unreasonably withheld.
- 18.8. <u>Independent Contractors</u>. The parties to the Agreement are independent contractors and the Agreement will not establish any relationship of partnership, joint venture, employment, franchise, or agency between the parties. Neither party will have the power to bind the other or incur obligations on the other's behalf without the other's prior written consent. Hart's employees, agents, and subcontractors will not be entitled to any privileges or benefits of Customer employment. Customer's employees, agents, and contractors will not be entitled to any privileges or benefits of Hart employment.
- 18.9. **Notices**. Any notice required or permitted to be given under this Agreement by one party to the other must be in writing and shall be given and deemed to have been given immediately if delivered in person to the address set forth on the signature page for the party to whom the notice is given, or on the fifth (5<sup>th</sup>) business day following mailing if placed in the United States Mail, postage prepaid, by registered or certified mail with return receipt requested, addressed to the party at the party's address set forth on the signature page. Each party may change its address for notice by giving written notice of the change to the other party.
- 18.10. <u>Trademarks</u>. Verity Election Office™, Verity Voting™, Verity Scan™, Verity Touch™, Verity Controller™, Verity Access™, Verity vDrive™, Verity Touch Writer™, Verity Ballot™, Verity Layout™, Verity Build™, Verity Count™, Verity Relay™, Verity Key™, and Verity Central™, and such other Product names indicated as trademarked names of Hart are trademarks of Hart.
- 18.11. <u>Attorneys' Fees</u>. In any court action at law or equity which is brought by one of the parties to enforce or interpret the provisions of this Agreement, the prevailing party will be entitled to reasonable attorneys' fees, in addition to any other relief to which that party may be entitled.
- 18.12. <u>Equitable Relief</u>. The parties agree that a material breach of the confidentiality provisions of this Agreement or restrictions set forth herein would cause irreparable injury to Hart for which monetary damages alone would not be an adequate remedy, and therefore Hart shall be entitled to equitable relief in addition to any other remedies it may have hereunder or at law, without the requirement of posting bond or proving actual damages.
- 18.13. **Government Use**. The use, duplication, reproduction, release, modification, disclosure, or transfer of the Products, no matter how received by the United States Government, is restricted in accordance with the terms and conditions contained herein. All other use is prohibited. Further, the Products were developed at Hart's private expense and are commercial in nature. By using or receiving the Products, the Government user agrees to the terms and conditions contained in this Agreement including the terms and conditions contained in this paragraph.

Exhibit A
Schedule A or Customer Signed Quote for Initial Order



## **Exhibit B**

# **Hart Customer Support Contact Information and Hours**

The following contact information is to be used by Customer for submitting Support requests to Hart InterCivic, Inc.:

Customer Support Center 1-866-275-4278 (1-866-ASK-HART)

Customer Support Center Fax 1-512-252-6925 or 1-800-831-1485

E-mail Address <a href="mailto:hartsupport@hartic.com">hartsupport@hartic.com</a>

Hart InterCivic, Inc. Switchboard 1-800-223-HART (4278)

Hours of Operation 7AM-6PM Central Time, M-F

After Hours Leave Voicemail with contact information for return call

(The rest of this page has been intentionally left blank.)

#### **Exhibit C**

#### **Definitions**

"Hart" means Hart InterCivic, Inc., a Texas corporation.

"Verity Access™" means the audio tactile interface (ATI) controller created by Hart as an add-on component to a Verity Touch™ that facilitates the performance of voting activities by disabled voters, for example, by providing an audio ballot presentation and/or accepting inputs from adaptive switch mechanisms that facilitate interaction with disabled voters, as needed.

"Verity Print™" means the device created by Hart for purposes of on-demand ballot printing; this device creates a blank paper ballot from the poll worker's selection of the voter's ballot style or precinct on the Verity Print interface.

"Verity Controller™" is a polling place management console capable of interacting with one or more Verity Touch™ devices by transmitting and receiving signals that manage an election, e.g., by opening and closing the polls, providing or recording an audit trail of system events during an election, storing cast ballot data, and applying data security and integrity algorithms.

"Verity Scan™" means the Verity Scan™ device created by Hart, consisting of an in-person digital ballot imaging device. The single-feed scanner transports and scans both sides of a ballot simultaneously, and it is securely attached to a ballot box that provides for secure ballot storage and transport.

"Verity Election Office" means Hart InterCivic's software platform that can accommodate a variety of election administration applications and is designed for interoperability with Verity Voting Hardware and Software.

"Verity Touch™" means the Verity Touch™ electronic voting device created by Hart. Verity Touch devices consist of hardware including an electronically configurable voting station that permits a voter to cast votes by direct interaction, which voting station in its present configuration created by Hart comprises an electronically configurable touchscreen liquid crystal display (LCD) panel for use in displaying ballot images, and options for tactile input buttons that facilitate voter options for selecting ballot choices and casting a ballot.

"Verity Touch Writer™" means the device created by Hart for ballot-marking functions. Touch Writer creates a paper marked ballot from the voter's selections on the electronic interface or the Verity Access ATI controller.

"Verity Voting" means Hart InterCivic's family of voting system components designed to conform to federal voting system standards.

(The rest of this page has been intentionally left blank.)

## **Exhibit D**

## HART PROPRIETARY SOFTWARE AND SUBLICENSED SOFTWARE

Hart Proprietary Software Licensed to Customer via annual subscription may include the following. Actual software and firmware licensed is indicated in the quote or response associated with this Agreement:

SOFTWARE/FIRMWARE NAME	VERSION NUMBER

Licensed Location is the jurisdiction named on the signature page of this Agreement. Any future releases or updates to the software versions listed above will be documented in Hart Release Notes and Version Verification documents. Such releases and updates shall be considered Hart Proprietary Software licensed under this Agreement.

Software Sublicensed to Customer via annual subscriptio	or	١:
---	----	----

None

(The rest of this page has been intentionally left blank.)

This page intentionally blank.





# **VENDOR CUSTOMER LIST**

- 2. Provide a current list of customers who are using or have previously used your Tabulation system.
  - Contact name, email and phone number
  - Jurisdiction size
  - Date of implementation
  - Product(s) and quantities purchased
  - What software and firmware versions are currently being used

This section contains the completed Excel spreadsheet, **Vendor Customer List Template**.





This page intentionally blank.